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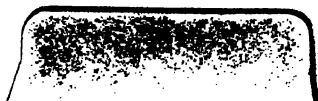
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SPiritUAL LAW
IN
NATURAL FACT



J. C. ARMSTRONG



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SPIRITUAL LAW IN NATURAL FACT



BY

J. C. ARMSTRONG, D. D.



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INTRODUCTION

THIS book is an effort to collect facts and theories more or less familiar to everybody, and to put them into a particular combination for confirmation or illustration, especially of spiritual truth. In this sense the field is somewhat new to the author. He finds peculiar delight in discovering new and wider likenesses between things spiritual and things material, and he is confirmed in the view that it is quite as correct to speak of spiritual law in the natural world as to speak of "Natural Law in the Spiritual World." Maybe we are yet to learn that the laboratory is, after all, as sacred as the altar, and that spiritual forces are as definite in their combinations and actions as those other forces which we have arbitrarily put on the other side of an imaginary line and labeled as simply physical.

To help any devout heart to this conception, and to win the favorable attention of any who may be skeptical toward God's written thoughts, is the chief reason for writing this book. Nothing like scientific order or theological sequence has been attempted in the arrangement of topics, and certainly no claim is set up for either extensive or intensive cultivation of the field which is opened. We come

upon our topics much as we meet the facts of nature in daily life, and much as we find various forms of religious truths mixed together in the Scriptures. Our readers are invited to take their Bibles with them and walk through the valleys and groves and fields. We look at the flowers, the fruits, the leaves, and the rocks. There we see footprints and finger-marks which we know are those of our Father, for we have become acquainted with them in his book. It is more than a fancy with us that Jesus was walking this very path we are in, when he gave those wonderful parables. Here are the vines which taught the lesson of a soul's fruitfulness when it abides in him. Here are the flowers God paints and the sparrows he feeds, just as he clothes the soul of a saint or tenderly cares for his children. We handle the flowers he made out of mud, and we see how heaven came down in sunshine and put celestial colors into them. We eat of the fruit which he compounds in mysterious laboratories to nourish the life he has created and loves. Wheat and tares grow together, out of the same soil and under the same sunlight; nor do we fail to note that though they are so near each other and so much alike, he remembers all the time which is the wheat, and he is not mocked at harvest-time.

Then we go to a sick-room and see one of his unordained ministers, but none the less his minister, giving remedies he has made to cure the ills of the flesh. We only have to remember that he is the

Great Physician. In a ward of the hospital we see a skilful surgeon, who has studied the delicate bodily structure which has been built after the divine plan, as he presses the knife along the path God has marked out with infinite precision. Because that path has been followed in the making, it can and must be followed in the mending. We stand breathless, because this man is a sort of high priest ministering in the most holy place. It is a service of sacrifice and suffering for one form of salvation. We go into a laboratory, and the devout man who is at home there assures us that he has not created nor decided anything; he is merely finding out how God has done and still does his work. We go into a factory and find men who have called in God's forces of steam and electricity—forces which they cannot see nor understand—to do their bidding and minister to human progress. These material machines are efficient just in proportion as they are orthodox.

In all these studies we are impressed with two or three very significant facts: In the first place, all these operators produce nothing of matter or force, but simply accept what is provided for them. Everything which they take hold of is a revelation from without themselves, is inspired. In the next place, there are definite rules which they must follow to secure the good which they seek and which seems to have been made for their beneficent use. In other words, they work under unfailing and in-

violable authority. The light which guides them to useful action is not light from within, but light from without. Investigation and reason have their office in comprehending the will of the Lord, but it is his light and his law that governs and guides. Last of all, it is plain that he who made nature made it for the welfare and the delight of his creatures. Wisdom and love are written large. True, one could ignorantly or wilfully violate the rules, but he does so to his own hurt. There is perfect freedom, but unquestioned responsibility.

As to the amount of significance to be given to the comparisons which are made in these studies, there will be difference of opinion. To some there may seem to be almost absolute identity between the facts of nature and the facts of grace, where others will see only a likeness more or less distinct. The writer does not undertake to weigh the evidential value of each case. He has tried to use discretion all along, and leaves to each reader the privilege of suggesting values. He has refrained from straining facts or twisting theories to make them fit any view he may hold as to nature or grace. He has no sympathy with reckless spiritualizing processes. On the other hand, he is profoundly convinced that the plans of God are as nearly the same throughout all creation as the conditions allow, and that where the laws of revelation and those of science border upon each other or meet in a common field, they are in close partnership. God does not change the

pattern as the weaving proceeds. It may not always be possible for us to trace the pattern all the way from the body of a fabric out into the delicate fringes, but in no case is the original abandoned. This is a material world which we see all about us, but it is our Father's house made for his spiritual children. The same great provisions run across the line we seem to have to draw between the material and the spiritual, and the promises written in the book find the conditions for their realization in this physical life and this physical world. So when our brief excursion for study ends, we come back to God's house and thank him that in wisdom he has made this world as our home during part of our immortal life.

J. C. A.

SPIRITUAL LAW IN NATURAL FACT

I

HIS WORDS AND HIS WORKS

“ANYTHING God makes is worth looking at.” So wrote a man who loved both nature and revelation and who delighted to find them in harmony with each other. The hand which wrote the Bible also made this material world. Between them there can be no contradictions. When we are able to understand the Scriptures fully and when we have mastered the problems of nature, we will find them in perfect agreement wherever they occupy a common field. An intolerable and impossible situation would be for a race of intelligent, moral, spiritual creatures, created for a final home in heaven, to be compelled to live in a material world made by an entirely different creator, fashioned on a wholly different plan, and governed on some other basis. There would be confusion, contradiction, and defeat at every step of the effort to live for the highest ends. We would have perpetual and irremediable chaos, rendering futile any attempt to be happy in the present or in the future. No man can serve

two masters; no life can occupy a place in two hostile realms at one and the same time.

Jesus was at home in his earthly mission. Despite the fact that human hearts refused him homage, he was at home with nature. He knew the meaning of the flowers and the fields. When homes were closed against him he went up into the mountains. Winds and waves listened to his commands; water turned to wine at his bidding; a tree withered under his cursing; blind eyes opened to look upon him; ears that heard no human voice awoke to his whisper; diseases fled at his reproof; and even the dead turned back to life at his call. The only hostility he met was the unbelief of human hearts. He walked and ruled the earth as part of his Father's wide domain, and not as a territory foreign to religion and heaven. And what is still more to our point, he found heaven mirrored in these earthly forms. Nature was a reflection or an expression of the same qualities in God that appeal to us in the Scriptures. Recondite and unknown spiritual truth was found mapped out in the plants and their growth, in animal instincts and material forces which are open to the eyes of all. This is what distinguishes the manner of his teachings from that of all other teachers. Nature was his picture-lesson, his text-book, his demonstration. He found in this primer the principles of knowledge which are more fully set forth in the advanced text-book of redemption.

No doubt if the Master were here now he would seize upon all modern inventions and discoveries, and throw their illumination upon the pages of sacred writing and far along down the path that leads heavenward, to make easier the progress of his disciples. He did not despise or discredit nature. He never let drop a hint that any one of his disciples would ever be justified in treating lightly the fashion or meaning of this material world in which God's highest creation finds its temporary home. God made the mount before he gave the Sermon on the Mount. It is an honor and an advantage to live in these later days, because there is possibility of knowing so much more of God than was known in the past. The universe is filled with the proofs of his wisdom and power. It is criminal to reject him in the face of all this proof, and it is well-nigh as criminal to shut one's eyes against the tokens of his constant presence in the physical world. The scientist needs to hear the word of God; the theologian needs to look upon the works of God.

At every turn the Master came, without any seeming surprise, upon some illustration of what he wanted to say about religious truth. The thirteenth chapter of Matthew is a picture gallery, on whose walls hang seven likenesses of the kingdom of heaven. Most of the pictures are from nature. He made nature, he drew the picture, then he made the comparison. The leaven, the vineyard, the grain-field, the flowers, the birds, the winds, the

flood, the darkness, the light—all of these were object-lessons in his kindergarten teachings to impart spiritual truth. We are authorized to read the glory of God as declared in the heavens and his handiwork as portrayed in the firmament. Is it not disloyal to refuse to learn these lessons he teaches?

A pioneer came from the crowded East to make a home for himself and family in the new West. The country was open to him. After careful search he found an eligible place, where elevation, water supply, accessibility, and fertility gave promise of a good home. He set about building the house, thinking of every member of the family as he laid out the rooms and provided for each. Love is not brick, tenderness is not mortar, anticipation of happiness is not like boards, but all these sacred elements helped to fashion that dwelling. When the family came, they were dull beyond excuse if they failed to see the evidence of his regard for them. This earth is not the final home of saints. A better house on higher ground will be built for them at length, but this is what our Father has done for us till the days of our training are over.

It ought to be to us a matter of special gratitude that nature has these innumerable lessons about God, and especially that its lessons are so thoroughly in accord with those which revelation teaches. Our first acquaintance is with the physical world; there is first that which is natural, and afterward that which is spiritual. The simpler lesson prepares us

for that which is more difficult. As in secular studies, the alphabet remains with us to the last page of the profoundest book, and most of the simple words of childhood are familiar to the end. Early in life nature breaks in upon us and our primary conceptions are fashioned from its forms. Our language is created to express what our senses take in of the material, and we continue through life in the midst of nature's marvelous works. The first door of our earthly house to open is the door which opens out into the physical world; later and more slowly that other door, which admits us to the spiritual world, swings back and we discover that while we are akin to the brutes our highest kinship is with God and angels. Acquaintance with the material ought not to lead us away from the spiritual. Learning the multiplication table does not make it impossible or more difficult to master the higher problems of mathematics. We learn to count with blocks, but that helps us to count the stars and trace the rhythm of their mathematical motions. There is one course of study, though different textbooks. There are separate revelations of the Father's mind, but it is the same Father. Most of this earthly life is, as we might expect, closely associated with the material, but nature is a friend to grace to help us understand God.

An unlettered man, who cultivated a few lean acres for the support of himself and family, was greatly surprised when told that his little bit of

farm was marked off and described in terms and lines borrowed from the heavens. The surveyor establishes corners and lays down borders for these farms and lots according to heaven's landmarks and heaven's directions. Our latitude and longitude are celestial terms. When we have need of fixed weights and measures we have recourse to the law of gravitation which runs throughout the entire universe, and we weigh our pound of food in the same scales God uses to weigh a sun and to hitch it to its place in the systems. Earthly facts are so thoroughly dependent on those of the wider world that we go at once to the original for our standards. This is true whether we are on sea or on land. A pilot pays small heed to the waves which surge against his vessel, or to the winds which fill his sails. They are shifting and uncertain. Instead, he looks millions of miles away and asks sun or star to tell him where he is and whither his course is taking him. His chart is of the heavens rather than of the waves. He travels on a great circle and keeps watch on the skies as he seeks an earthly port. The stars are his banner by night and the sun his light by day. He waits for heaven's signals when to take up his ark and when to turn this way or that. Here, as elsewhere, increasing information convinces us of the unity of the universe under one wise and harmonious control. The lower and the higher are parts of a wide-stretching kingdom, which is harmonious from center to circum-

ference because made and controlled by one Mind, which is wise and which has all power.

In meditating upon the ways of God in the realm of grace, I have been startled by stumbling upon some fact or force or process of nature which closely resembled doctrines and experiences of grace. The passing wind which keeps sweet the breath of man or which, stirred to wrath, destroys all in its path, made me think that the love of God and his wrath may be but the different manifestations of the same force. It was only a physician's remedy for disease, but it was strangely like the incoming of sacrificial merit to cleanse a soul from the malady of sin. It was only the annual task of planting seed and growing a crop on the hillside of the old farm, but the plowboy became a laborer with God, and his humble calling became wondrously like the work of the preacher who plants seeds of the kingdom in unpromising soil, but rejoices to see it watered from heaven and made fruitful. Sometimes in these experiences I have wondered whether I had not wandered across the border-line between what we call material and what we call spiritual, and without noticing the difference had strolled into the suburbs of the heavenly. The question invariably came up, whether, after all, we had not erred in our blindness in making too sharp a distinction between what is religious and what is secular. Perhaps the scientist has been looking at the texture of the cloth while the theologian has

been talking about its color. This one has analyzed the chemistry of the loaf while the other has been occupied with its taste. One has studied the mechanism of the wire while the other has been reading the message it was carrying. There is a lot of splendid theology in the multiplication table. The binomial theorem is an unanswerable proof-text.

A word of caution here is not out of place. Matter is not the same as spirit; nature is not identical with grace; there is a difference between the things seen and the things unseen; what is true of the body is not always, perhaps never exactly, true of the soul; the flesh is not the spirit. We cannot throw away the Bible and find the way to heaven by following a star or a river. There is no path in the forests or in the fields that certainly leads to everlasting life. There is no gushing spring to furnish the water of eternal life. Our fathers ate manna in the wilderness, but if that is all the food they had they are dead. There is no skill that can build the holy city out of our common bricks and cement. There is not gold enough in the Klondike to pave one block in the new Jerusalem. Natural religion has no system of salvation from moral evil, though indirectly it lends its cures and its penalties to the enforcement of ethical laws. It has no message of a father who waits at the gate with the word of pardon on his lips.

There is but one God, and he rules by law. Possibly we can see hints in nature of his benevolence

and of his fatherly care. But only in his book does he take us apart from nature, of which we are a part, and there open to us the confidences of forgiveness and peace. We must not go to the scientist and demand of him that he demonstrate to us all that we have learned of God through Jesus Christ. The most we can ask of the scientist is that he tell us whether nature puts a final and effective veto on the operations of grace; whether there are in nature any hints or likenesses or illustrations of those doctrines which are found in the Bible. Maybe he who made medicinal remedies for the physician to use in healing disease can himself go a little farther and bring Lazarus back from the dead. Feeding a multitude by the seaside is not, after all, so very different from carrying a basket of food to a starving family in your block. These are not the same as ministering specifically to sick and starving souls, and we must not confound them; the physical is not the spiritual, the temporal is not the eternal; but the two worlds are bordering lands, and we must deny neither the one nor the other.

I have been the more hopeful of finding a useful place for this volume because a feeling has gone out that the spiritual is not real, or that it is not worth while. It is not beyond truth to say this is emphatically a material age. It is a time of rich food, of fine houses, of costly clothing, of easy riding, of tremendous business enterprises, of

money-making, of colossal fortunes, of fashionable display of riches, of sight-seeing, and of wide travel. The eye, the palate, and the spirit of pride are in command. We have quit the closer and careful thinking our fathers did, and all we care to take the pains for is to see. It is easier to see than to think. It is a day of pictures and picture shows and illustrated papers and kindergarten methods for old as well as young. Even the preacher must resort largely to illustration and description in order to have a patient hearing. Add to this change of taste among us the further fact that marvelous progress in scientific discovery and invention has obscured for a time the value of spiritual matters. It may have gone so far that the ordinary student can go from the primary class to a diploma of the university, engaged every day with worldly studies and material forces, without having so much as heard from teacher or text-book that there is a spiritual realm. The secular has become dangerously secularized. Our current courses of education do not so much oppose religion as they ignore it. If there is allowed to be another sphere of life, it is treated as a something entirely removed from time and place and matter and nature and this present life.

These younger people need to be told that they are right now in their Father's land; they are studying every day the laws he has instituted, they are handling the products of his hand. The knowledge

they seek with commendable avidity is nothing more nor less than standing by and learning how God accomplishes the work of his hands. He walks before them in the path; he is beside them as they study his works; they are forced to think his thoughts after him; in every invention he lays down the lines to be observed; in chemistry, in astronomy, in biology, the study consists absolutely in following a text-book which God wrote as really as he wrote the law on tables of stone in the mountain. All that the scientist or inventor knows is in the book before it is learned, and the authority is without question. To call some student back from forgetfulness of it all; to induce him to stand in silence a moment and hear the whisperings of heaven; to have him look down and see the footprints of the Maker—this is what I should like to accomplish by this message.

There is another condition which seems to me to make this line of thought especially appropriate. A school of idealists has sprung up, and though the classes of this school are widely apart in some of their theories, they are agreed in denying the reality of this physical world. Some of them, on philosophical grounds, insist that we cannot know anything about an exterior world, nothing beyond the sensations we experience. Nature has little or no appeal to them. Another class, on what may be called religious grounds, denies the reality of matter, rejects the testimony of the senses, and reduces the

universe to some sort of impersonal deity. Alongside of these idealists there is the school of materialists. With them there is nothing but matter; theirs is merely a world of dirt. They deny the existence of spirit, the reality of any vital distinction between right and wrong, and, of course, their doctrine has no place for immortality of the soul.

Such theories are as empty of fact as they are destitute of hope. One denies the physical, the other deifies it. Between these unreasonable extremes, and over against them both, stands the right understanding of Scripture and the right interpretation of nature. Every step in scientific discovery is a further confirmation of our faith in the unity of the universe. That nature is intelligible is proof that it is the product of intelligence. The parables of Jesus proceed on the claim that all truth is sacred, whether it be truth found in nature or in revelation; and the further claim is implied that all truths are in harmony with each other, no matter from which sphere they are learned. This is the only rational view of nature or of grace. Ultimately unity rests in an intelligent, powerful, and beneficent Creator, whom the Bible teaches us to trust as our Father.

I have thus called attention to the constant and familiar and apt use which Jesus made of nature and of inventions based upon natural law. In this he warrants us in thinking of the material world about

us as part of God's kingdom. It is filled with God's thoughts; it displays the divine power; it illustrates heaven's methods. It occurs to me that there is need to add a word as to the part assigned nature in other Scriptures, especially the Old Testament. Now and then I have come upon remarks by certain modern thinkers to the effect that biblical writers represented God as dwelling afar off from earthly affairs, working arbitrarily and unnaturally whenever he chose to accomplish definite purposes. They use the word "transcendent," by which they mean that the Scriptures introduce him now and then into this lower sphere only to work a miracle or inaugurate new movements. The modern representative insists upon the immanence, or permanent dwelling of God in the world of nature, accomplishing his purposes through fixed laws and in usual manner.

It is readily granted that the older writers did not talk of immanence or secondary causes or uniform laws, but they did dwell most eloquently on the majesty of God in the control of natural forces. The Scriptures are full of the thought that nature is but the product of his hand, and every occurrence comes under his control. Take as a single example Psalm 104. Light is his garment; the heavens are a curtain he stretches; the bed of the ocean is the beams of his chamber; the winds are his pathway; clouds are his chariot; at his voice the earth melted and the seas fled; he made the path of rain-clouds and raindrops; these fountains he opened

for the thirst of man and beast; he irrigates the mountains and creates harvests in the valleys; in his looms carpets of green are woven for the fields; he planted the trees and his birds sing in their branches; by the moon he marks off the hours and by the sun he carves the day out of the eternal years; even young lions take food from his hand; to man the days are measured out, until he goes at length to his final home. And then in a splendid summary the exclamation is made: "O Lord, how manifold are thy works! in wisdom hast thou made them all; the earth is full of thy riches."

Thanks to modern science for helping us trace more accurately the paths of his creating and control; but it is not a recent discovery that God is present all the time managing affairs of this material world which he created and in which his glory shines. This earth is not a foreign country to him. All through the Old Testament there is a close linking of the material to the spiritual world, and in repeated cases physical rewards and punishments are made part of the moral government of heaven. How true and how graphic is this from Henry Drummond: "The visible is the ladder up to the invisible; the temporal is but the scaffolding of the eternal. And when the last immaterial souls have climbed through this material to God, the scaffolding shall be taken down, and the earth dissolved with fervent heat—not because it is base, but because its work is done."

II

LIGHT

LIGHT is recognized as one of the most wonderful of all the natural forces. For a long time it was believed that every material, visible body sent out a constant stream of minute particles, and that these particles in some unexplained way reproduced the picture of an object in the eye. That theory, along with a great many scientific theories and as many theological doctrines, has reposed in a junk-pile for years. The chaff-pile beside the thresher is larger than the heap of clean grain. It is now universally accepted that light is a manner or mode of motion. It is not a something of itself, but is the movement of a peculiar form of matter. Eternal stillness would be eternal silence and eternal darkness. It may be that all motion is a hymn of praise or the discord of a shriek, only our ears are too dull to hear more than a few notes in the endless scale of sounds. The universe is quivering with movements too small for us to apprehend, except as we catch a bit of the motion in terms we call "sounds," and these movements redeem the world from silence and from death. Light itself is invisible, as invisible as the spirit within us or as the presence of Jehovah

moving amid the affairs of his kingdom. Its business is to reveal.

Going a step farther in their explanation, scientists assure us that light and heat are one and the same force. In essence there is no difference between them. If the waves of ether are of a certain length and rapidity, they give us the sensation of heat, but if their amplitude is altered and their time-table changed, we have light. And in another step which they threaten or promise to take, they are about to tell us that electricity is going to take its place beside heat and light, and make a unity out of a trinity.

Indeed, one of the marvelous achievements of modern science is the identification of several forces which were always considered as entirely distinct. In an earlier day the force which drove the wind was supposed to be under a special god, the lightning was the property of another, and the fire of another, and so the earth and air and sea were so many different realms. Now these forces are found to be in close alliance. They are partners to common ends, and in many cases they are discovered to be absolutely identical. There is no longer war between two gods, whose kingdoms border upon each other, but intimate partnership, if not actual identity. Science is made up chiefly of a discovery of the uniformity, orderliness, and unity of all material forces. Nor can any one predict how much further this unity will assert itself. Because nature

is understandable, it is the product of intelligence; and because it is harmonious, it was made and is ruled by one mind. Modern science has rendered polytheism impossible and atheism unreasonable.

There is a startling passage of Scripture which says that "all things are naked and opened unto the eyes of him with whom we have to do." This declaration takes us at once beyond the material world and its ministry of light, uncovering some of the objects close about us. Instead, it carries these conceptions over into the moral world and affirms that at some period a spiritual sunlight will throw its floods upon all the conduct of all men and uncover the entire scene to the gaze of men and angels. Darkness is the element for wickedness, but righteousness belongs to the light. The only, but sufficient, reason why men love darkness rather than light is because their deeds are evil. Thieves and assassins and gamblers and cheats always hide their evil under cover of darkness. At least one-half of life's thoughts and plans are never made public. There is a foolish assumption that whatever is hidden from view will forever remain concealed. But science no longer allows darkness to dominate. It has learned for us that with perfected instruments to supplement our imperfect sight much that had been concealed by darkness is brought to light. The human eye is limited in its range. One cannot see through ordinary objects of appreciable thickness. But it has come to be known that a measure of light

passes through material objects and carries an image that may be made visible. The scientist turns a ray of light upon a piece of leather, a block of wood, a sheet of iron, or on the human body and brings out a picture which the unaided eye could never catch. Fractures, dislocations, lesions, and foreign substances are clearly revealed by the penetrating light and through instruments far more delicate than the eye. There is probably light enough now penetrating every recess and corner to make the whole physical world, near and far, fully visible, if only our sight were more vigorous.

Such revelations of science are frightfully suggestive. One thinks of the possibility that the soul is penetrable by the rays of moral light or is subject to exposure beyond our wildest hope or fear. The conception of the possibility, if not the certainty, of the uncovering of all sin, is not a scientific anomaly. Rays of moral light now shoot through the wide range of human conduct, motive and purpose and unspoken suggestion and secret deed, painting the full transaction upon an indestructible background to be gazed upon by the whole universe. The common form of our faith, that there are books in which records preserve in imperishable form the conduct of men, and by which we are to be judged at last, is but a feeble embodiment of what takes place in heaven's bookkeeping. By nature's present arrangement we can plainly observe the bodily movements of those who are about us, and can take note

of the slightest action. A blush, a sneer, a curl of the lip, a shaking of the head, all of these are open to us, and they often reveal more plainly than words what is going on in the mind. But there may come a time when powers of perception will be increased or when fuller light will be thrown upon moral movements, and we shall be able to read thoughts and see motives and translate purposes that are now hidden. The fires which picture the torment of the lost may be but the brilliancy of the light which uncovers to men and angels the secrets of a corrupt or unworthy life.

Could you come to know that some one had been following you for days or years, using one of these machines for making moving pictures, and that in his film he had the story of your life and all the places you had frequented, the company you kept, the attitudes you assumed, you might not feel comfortable about it. And then if he should announce that on a certain evening he is going to throw that entire scene upon the canvas, you would probably take the first train out of town or sue out an injunction. Certainly if the scientific fact corresponds to matters spiritual, and all your inner life were threatened with similar exposure, there might be torment of soul that only lacked sufficient time to make it eternal punishment. This kindly, beneficent, life-nursing, heavenly light which gladdens an otherwise dark and dead world, has in it the potency of judgment and condemnation. The films of heaven's

laboratory preserve unwasted and infallible the chapters and lines and letters of human history, and the judgment scene might be described in terms of the photographer. Not alone are the sins we commit to be exposed in this public exhibition, but the silent sufferings, the unmerited criticism, the unjust condemnation, the patient endurance of injustices, the faithful performance of unrequited services, the unwritten benefactions and the unrecorded struggles of tempted souls to be loyal to right are then to have their first and their full recognition.

In civil and social government we are just beginning to recognize that publicity is necessary for the maintenance of good order. Courts and officers are using their shrewdest methods to uncover testimony. They are invading the corners which were supposed to be so strictly individual as to be inviolable, and are trying to compel men to do what is right. Commissions and investigating committees are invading the sanctity of counting-houses and bank records and stock-books and financial records of private firms, on the growing theory that it is to be through exposure that righteousness may be strengthened. It begins to look as if there is to be no private or hidden business in the future. The solidarity of the race, the close partnership of interest in all social and financial affairs, the inseparable interest of rich and poor are coming to be looked at in another way. The race is moving, as to science, as to government, as to property

transactions, as to political conduct, and as to sin, right out into increasing light. An inevitable and universal result of that will be greater knowledge, larger view, more universal prosperity, a better adjustment of rights, and a cleaner sort of living. When there are no dark spots in which men may hide their evil deeds, either wickedness will have to cease, or the entire race will go down in conscious tolerance of wickedness.

At some period in the progress of the race, there was no articulate speech. Only by rude signs was it possible for one to know what another thought or felt. Two souls that lived close together in space were far apart in their ability to communicate with each other or to understand each other. With the facility of refined speech, we may exchange thought and carry on an intimate commerce between mind and mind. However, within limits, this communication is purely voluntary. You need not tell your secret, and unless you speak it out your most intimate friend is powerless to know it. Maybe we are to come to the period when we may read each other's thoughts, just as once we advanced to the stage where we could express what is within us. It will be a new day when, as you pass along the streets, you can see into the secrets of those you meet, just as now you can see inside the home whose windows are open and whose lights are burning brightly. It will be a new situation when you are rejoiced or frightened with the knowledge that

those who are around you are acquainted with every secret wish and hope you cherish, exactly as in the past they have been aware of your bodily movements. Limits which are now set against our power of reading minds may be removed, and every brain become an open book and every wish a legible page.

All our natural abilities are circumscribed. My arm reaches but a foot or two above my head, while all the expanse stretches out beyond my touch. At best I gather only the few apples which ripen on the lowest branches. I can lift my voice to its highest pitch or swell it to its largest volume, but across the block or over this hill I am not heard. A flock of birds passes over my head, but they are safe from the range of my gun. I see distant hills and mountaintops, but it is not far out yonder to where smaller objects are indistinguishable. Even with the best telescope there are infinite stretches of space and infinite ranks of stars which are unseen. The microscope reveals structures too tiny for the naked eye to see, but it tells me of other descending ranks too small to be seen.

The unknown grows upon us daily. As you gaze into the deep sky at night, it is no trouble to see the prominent stars. The eye hunts them out at once. But here and there are patches which appear blank. If seeds of worlds were planted in those areas, the harvest has failed and all is desert waste. Has light no story to tell of these places? The astronomer turns his camera's face to that spot.

After minutes of exposure he carries it into his dark room, his holy of holies, his audience-chamber with the Almighty, and with closet door closed, waits on the ministry of light. At length he comes to me with a photograph of a star which no human eye has ever seen, whose existence had never been detected, but which yields itself to the wooing of these rays of light. These vagrant, orphaned threads of light which have been thousands and hundreds of thousands of years bringing their message have arrived to bring greetings from the stranger world, and to claim enrolment in the congress of worlds! Along these penciled wires of light, or through this wireless expanse, are coming the greetings from God's outposts, and when the final display comes to pass, the unseen and unknown stars shall stand out in eternal brightness—the children of light in a world from which darkness has forever fled. And when the scientist has shown me these wonderful proofs of the universal reign of light, and when he has proved to me that there is much beyond the range of my small understanding, then I begin to comprehend that we walk by faith as well as by sight.

And when I see a troubled soul look away to what seems to me a blank spot in the heavens, breathing out wish or waiting for recognition, I dare not say the hope is vain. What right have I to put narrow limits to the possible or the real? And when the averted face of the inquirer turns back to me radiant with the brightness of a new hope and full of the

image of the invisible God, I am thankful to the photographer who gave me this stepping-stone to my faith. Surely both of these worlds are within the benevolent jurisdiction of our God, and he is leading us gradually through the dimness of the present to the endless day, the undimmed light of that other land.

It belongs to another chapter to speak of the constitution of the heavenly bodies, but the method of ascertaining the constituent elements of the stars belongs to the science of light. God sends the message in cipher. A fragile ray of light that may be quenched or diverted or corrupted by small interference reaches the end of its long journey and falls upon the prism. What a disappointment it must feel for such a landing after such a heroic journey! And when it falls upon the prism, it breaks and shatters into divorced fragments of straggling light. But in falling it tells secrets which no one else has ever told. It reveals that the planet from which it was despatched a thousand years ago, and from which it has come without obstruction at the rate which would carry it around our earth eight times a second, is composed of exactly the same material used in building our earth, and that therefore we are blood relatives. 'And this messenger assures us that there are other wide extended plains beyond its home, and that if we are patient additional light will break upon us. There is more beyond.

And then the microscope stands on the table

beside the telescope, and it brings its lessons from the ranks below us. Physically man is far above the average of bulk in the family of living forms. Looking down along the trembling path of light, he sees the forms growing more minute until his instrument fails, and he waits to find the border in the realm of the small. As far as light penetrates, and the end of its ministry has not been found, it uncovers the wonderful works of God and promises us that when our vision becomes more acute and is able to enter new scenes, there await us larger knowledge and fresh evidences of the unbounded universe of our Father. Our degrees of space may not emerge into infinity, and our measures of time may not multiply into the eternal; we cannot know just how they are adjusted to each other; but these enlarging views may well enhance our appreciation of God and qualify us to be citizens of that country which faith tries to picture. 'As for our little earth, the sun rises and reveals more and more of the affairs earthly, and so the Sun of righteousness shines with increasing light to make plain the ways of God to men and the path which shines more and more unto the perfect day. Whatever heaven is, it is light. Whatever perdition is, it is darkness and despair. It is more godlike to scatter sunshine than to throw shadows. One day, when in doubt about the road we ought to take, our interpreter spoke to a Chinaman after this manner: "Lend me your lamp, big brother; lend me your

lamp." It is the business of every traveler along life's highway to carry a good-sized, well-trimmed lamp, and to hold it so that it may give guidance to those who are hunting the road home.

Color belongs to the department of light, but color is not the same as light. Scientifically they are associated, but must not be confused. Pure light includes all colors, but betrays no color. The prism unravels the threads of light and analyzes them into their constituent tints. Some one has said God is the great mathematician. One of the wonderful features of his works is their mathematical order. Sounds and colors are purely mathematical verifications. A proper combination of truths produces well-rounded, dependable substance for the intellect and the heart, but a bad mixture may be fatally misleading, just as the same chemical elements differently combined may create medicines or poisons. It is a heresy in theology and in science to take one or two truths out of their proper setting and to present them as the embodiment of all truth.

It is entirely correct to recognize God's mercy and to indulge the delight such a doctrine warrants; but it is heresy of the worst type to conceal his justice. The idea of his justice justifies our confidence in the moral steadfastness of his government, but to leave out his mercy is to cut down our sweetest hopes. Heredity has much to do in the make-up of any ordinary human life, but none of us may charge our ancestors with all we say and

do. Environment is important in shaping character, but the stock with which we started and the voluntary use we have made of our advantages must be taken into account in the evening when awards are to be made. The old man is what he started with in mind and body, plus what was cast into his life by his surroundings, plus the voluntary use he has made of all these helps and hindrances. Parental responsibility is mightily enforced by the doctrine of heredity; social obligations are written in the doctrine of environment; and personal responsibility is dominant in the doctrine of free will. It takes all three of these elements to make up human life. Undoubtedly there is a good deal of color-blindness among scientists and theologians. We have found one or two bewitching colors and have forgotten white light. We are enamored of one or two correct theories of things material or spiritual, and have undertaken to view the whole world through glasses of these partial colors. Light and truth are composite.

Of the ministry of light to life, there is not time to speak now. Why a stalk of wheat must have light in order to make its grain, or why a seeming weed can weave wonderful flowers out of the August sun, we may not know, any more than we can explain why a soul that is to bear good fruit or produce beauty of character must needs grow in the light of heaven. Because we cannot understand is no reason why we should not believe. The hunger-

ing of a plant for light is beautifully pathetic. The benighted life feels its way in the darkened cellar, and at length turns its sightless face toward a small window, and if it must perish it persists in perishing looking for the light. If there is an immortal soul looking for heaven's smile, we can describe it in terms of plant life and of hungering or thirsting for the living sun. No ministry is more vital or more unostentatious than that which goes on around us every day, in which the plants and animals, so various in their form and functions, are alike drinking in the vital influence of a sun which mothers every living thing.

Light is the revealer. The shadows and screens and covers which have been invented to conceal our conduct against God and men, are to be torn away, and we shall both know and be known. Exposure will be the essence of judgment. Light will also vindicate those deeds of service and benevolence which are too often classed as selfish or fanatical or merely spectacular. The things we suffered may prove to be the experiences over which we might better have rejoiced. Light will bring to our enlarged vision outlying fields of truth and power and plan embraced in the kingdom of our God. Germs of evil will perish beneath health-giving light. Poisons will be burned up by the radiance that exposes them. Every form of life will flourish as in the tropics of heaven's favor. The Lamb is the light of the new and nobler world.

III

ACCOUNTABILITY

It would be difficult to formulate human accountability in stronger language than that Paul used when he said: "We must all appear before the judgment-seat of Christ; that every one may receive the things done in his body, according to that he hath done, whether it be good or bad." We are under authority. By nature we are endowed with sufficient intelligence to understand what obligation means, and in some way there is given us sufficient knowledge of what that higher power wants us to do. Conscience within answers to law without. Moral power implies moral environment and obligation. Because of all this, judgment is reasonable and inevitable. At some time along our history, either now or in the future, we are to receive the returns of life. There will come back to us the full fruitage of what we have planted.

Following the language of the Bible, theologians have generally understood and have spoken of a day of judgment. They have pictured a day when the Judge of the universe shall gather before him all the race, and the awards of life shall be meted out. The picture has included record-books which

unerring hands have kept of every transaction. Alongside of that record will be placed the unchanging law, and upon these a decision will be rendered. Those whose records fulfil the law are to be sent with approving sentence to a heavenly reward, while those whose records are short of the requirements are to be sent away to dwell with those who forget God and who are banished from his presence.

I have no fault to find with the imagery under which human accountability is thus set forth. In as plain terms as one could wish, the administration of eternal justice is declared. But I must beg you not to allow this imagery of a court-room and of court proceedings to obscure what is meant, nor any small objection you raise to the method of putting it turn you away from the thing signified. When the Scriptures were written, men were familiar with criminal court proceedings. Unfortunately such courts have always been a necessary part of earthly transactions. Very naturally the writers seized the most familiar and fitting illustration within their reach to make plain a final adjustment of righteousness. Here, as elsewhere, we are helped to comprehend the unseen by its likeness to things seen. That judgment, whatever its form and whatever its date on the docket, includes all men, and it takes note of those transactions which have in them moral quality. It will not be asked if a man is poor or unfortunate or uneducated or obscure, but there will be a complete discrimination between what is good

and what is bad. Here lie the qualities which persist in fixed character, and upon these the issue will be decided.

I am perfectly willing that modern science shall furnish the form and furniture and wording and methods of this settlement of the soul's account. Nature, poorly as we comprehend her laws and processes, has terms and processes which are equal to what can be found in any court-room to make emphatic to us the inevitable destinies of good and evil. Does science teach any lesson akin to the teachings we have indicated? Is there anything in astronomy or chemistry or biology or physics which makes the Bible doctrine of a judgment unreasonable? Has nature such a suggestion? Would a man thoroughly versed in nature's laws be shocked by this Scripture doctrine as by something entirely strange to him? I beg to say in advance that I am not expecting to find direct proof of this doctrine. Science occupies another field. It is limited to time and to material substances. But I believe we may discover in the administration of nature such likenesses to the doctrine of the judgment, that no sort of rational fault can be found with the Scriptures on that point.

The fundamental dictum of science is that every substance, animate and inanimate, is subject to law. I am grateful to the men who have sought to know the what and the how of all things about us, and especially for their verdict that law reigns every-

where and over all things. It is more comfortable to live in a realm of law than in anarchy. Nothing happens, nothing is ungoverned, nothing is turned loose to do as chance may direct. There is a universal plan which causes all material forces to make for order, and all moral forces to make for righteousness. What we are talking about now is real law; that is, a statement of a rule of life with a penalty attached. Without penalty, a law becomes a harmless and helpless suggestion. There is a definite place and a definite function for each force and faculty and member and agent and instrument in the world. Law is the program of him who governs. Penalty is at least his disapproval of failure to obey. It is not a waste of time or effort to insist upon this. A suggestion from one pupil to another as to the lesson may be disregarded with impunity, but the word of a teacher belongs to another class and has different consequences. The scientist has convinced us that every corner of the universe is pervaded by law, and that every substance and force he has found is put under rule. Failure to obey results in disorder, disarrangement, defeat, and injury. The injury is always of a kind and degree appropriate to the disobedience and to the disobedient.

Science absolutely confirms, so far as the two realms involved allow comparison, the Bible doctrine of human accountability, and the further feature that the sinner shall bear the penalty of his own

sins. But science does not quite indorse the familiar imagery already referred to of a court-room and of a special day and of record testimony. Nature does not bring the agent and his destiny into such spectacular publicity. In most criminal trials in human courts it is necessary to go out and gather up testimony in doubtful scraps, and with much discrimination ascertain the reality or extent of guilt. Occasionally, however, the thief is caught with the goods upon his person, or the murderer with the red stains on his hand. He brings proof of his guilt with him. The doctrine of science is that the soul that sins against God is caught with the goods on him. He has the testimony in himself. He is his own condemnation. Into his character are woven the indelible records of his own life, graven so deep into his moral being that the impress goes through and through.

The photographer catches the image of the face or movement which passes before him, and after days or years he may unroll the film that brings it all to view. The human heart is all the time taking a picture of itself, hiding away upon its indestructible plates of the soul all the moral experiences through which it passes. By and by the time of development or of revealing will come. Other testimony might be questioned or impeached, but not this. Every man carries his complete record.

I used to pass almost daily by an office-building where there was hanging in a sort of recess a

strange piece of mechanism. It had a face like a clock, only it was crossed and marked all over with fine lines. Out on the point of what corresponds to the hand of a clock, there was a sort of pen, which carried red ink. As that hand went around in the course of a month there was a clear red mark made. And you could look it over and know what was the temperature of every day and every hour of that week. You could tell the barometric pressure, the amount of humidity in the atmosphere, and I know not how much else it would have told me if I had been clever enough to read its whole story. While men slept or toiled, while it was hot and while it was cold, that little machine kept its accurate record. Changes that your body would never have detected were observed with faithful precision.

We lay all day in the Bay of Kobe, Japan, loading and unloading the cargo. The sea was almost too rough to go ashore on a steam-launch. The waves were high and defiant and irregular. Warning came of a possible typhoon. Late in the afternoon we steamed away, and at eight o'clock we were just at the gate going out into the ocean, with our course running northward along a dangerous coast. Our captain stopped the vessel, the anchor was lowered, and we lay in the sight of a friendly light just off there. We were doing that because a little piece of glass, a small tube, had registered a condition of atmosphere which told of danger. We waited all night under an eye that did not go to

sleep, and we felt safer to abide in the shadow of the mighty, if not the Almighty. The storm registers itself, and character has its own evidence.

Have you reason to fear that the great enginery of your physical life is running irregularly, that you have heart trouble? The doctor puts a piece of machinery to your chest, and it brings to him sounds and sighings and murmurings of struggle going on in there all unheard by dull ears.

A little scientific construction is given the collector on a street-car, and every time he takes a nickel he pulls a button and a bell rings within. He may not touch that record, any more than you may open your soul and blot out the handwriting that records your indebtedness to moral law. At evening, that conductor must settle by a record which his own hand has made, but which he could not change.

I tremble to think how every year these scientists are getting into the inmost secrets of our physical and mental life. They can put a sensitive disk against the edge of your nerves, and then applying a touch to your body, or firing a gun near you, they measure the exact time and strength of your nervous response to such appeals. It takes some of us a longer time to think and feel than others, or it takes some of us longer to answer such appeals as are made to our senses.

The creaking of your gas-meter is measuring off moment by moment the increase of your monthly bill,

and no wish on your part to keep it down has any effect. When you turned the key you decided how much you were going to use and how large the bill is to be. And the same is true of the electric-meter. The fact is, there is all about us and over us and within us a system of self-registering, accurate bookkeeping, and by that record we abide.

There are thousands of earthquakes every year. Occasionally there is one that overturns houses and destroys life, but most of them are so mild that we do not feel their movement. But the scientist has constructed a detective appliance, and if a tremor occurs at midnight while we are asleep, or if it is too faint to be detected in the ordinary way, the seismograph marks it down with rigid fidelity. In the morning its markings will show exactly when the tremor began, how long it continued, from which direction it proceeded, and how far away was the point of disturbance. The whole earth suffers the shock, however gentle it is. One can readily understand that the moral world may be quite as sensitive to the sins which men commit. A thrill of agony runs throughout the moral universe when a blow is hit, or an oath is uttered, or an innocent life is betrayed, or when a lie is spoken, or when dishonesty is practised. Maybe there is a spiritual seismograph which records the transaction and measures its violence and exactly locates the heart in which the sin took place. In the coming daylight every eye may read the record and identify the guilty.

Let us put your moral condition in terms of mathematics. When you began life you had certain natural powers common to all men; and along with these were certain inheritances from your ancestors, such as violent appetites, tendencies to self-indulgence, inherited thirst for drink, a weak body, and a weak will. All of these natural and inherited modifications made up your capital with which you started into the business of living. Since then you have worked with that capital. Your thinking and feeling and willing and doing have added to or subtracted from or modified the original stock with which you started. An accountant can take up the record which lies in your character, and he knows that you are now composed of what you started with plus what you have done along the way. It is a simple question of losses and profits in the account. Every year you have lived has witnessed that what you have done has increased, while your original stock has remained the same in the account.

Daily you have become less like your ancestors and more like yourself. Your good is marked plus and your evil is set down as minus. At length the sum remaining, whether of profit or of loss, stands there in figures which are as true as heaven. You are a millionaire or a pauper, and it is unalterable. You are your own bookkeeper. Your character is self-registering. Science pronounces you a self-registering apparatus, and revelation says the same.

A story is told of certain restless, adventurous,

dissatisfied Englishmen who determined to leave their native island and find a wider home in a new world. They sailed unknown seas and traveled afar to find a home that would be to their liking. At length one good day they sighted land. Its shores were inviting. They landed only to find it occupied by people with whose customs they were not quite familiar. The natives looked with distrust upon these new arrivals, with their tanned complexion and their rough manners. But with closer familiarity the rovers discovered that they had landed at Plymouth, the well-known port of their native land from which they had sailed, and they found that these hesitant citizens were their own brethren. Separation had changed somewhat their speech. The wanderers had taught themselves to think unkindly of their countrymen, and the dwellers in Plymouth had spoken harshly of their fellow-countrymen who had despised and deserted them. But the joy of meeting again, and the better understanding of each other, made their reunion doubly grateful.

It is possible that theologians of the earlier days were not always considerate of their neighbors who chose to study nature. Possibly the scientists were self-willed and arrogant. At any rate, it has been hinted that these scientists have wandered far off from the homeland, and that they have spoken unkindly of the old faith. We have been in mourning over the waywardness of our friends of the labora-

tory. Indeed, we have mourned them as lost. They have at length come upon what they are pleased in one way and another to call a new universe and a new Bible. They speak a strange dialect to those of us who remained at home. But now that we are growing more friendly and begin to compare notes, it is seen that they are coming back to pretty much the same old land and to the original principles. Those of us who have tried to defend the old faith have found out that these are our brethren, that they had right to protest against some of our forms and conclusions. Anyway, they are at home with us again, all of us wiser for the separation, and we are going to dwell together as neighbors; yes, we are going to labor together as fellow-helpers to the truth. There will remain many differences of opinion and more differences of terminology, but we are living under the same sky and facing toward the same goal.

These patient men who have been delving among the rocks and walking among the stars, who have uncovered our nerves to skilful treatment, and who are teaching us what to eat after all these years of our practice, these men are worthy of our confidence and of our gratitude. They have shown us a larger world than we had known; they have stretched out the years into millenniums and given us a larger conception of the plans of our God; they have proved to us the tenderness and delicacy of the Father's care over the creatures he has made; they

have told us that life has ever been and may continue to be God's secret; and they have told us that even in nature there are indications of curative and redemptive agencies akin to those which the Cross claims. Hereafter we are going to build the schoolhouse and the church-house close together, so that those who study will also be those who worship, and we will come to understand that to know is part of worship.

IV

PRAYER AND MIRACLES

WINDS and waves do not rise or fall at the bidding of a human voice. Many a devout passenger at sea has cried out in fright and prayer to no seeming effect. Occasionally those who never thought of having family prayer at home have not hesitated to kneel with all the other terrified passengers when the waves were sweeping the deck. High winds and rolling clouds that threatened a cyclone on land have been aids to a passing piety born of terror. In few of these cases, however, is there decided and indisputable evidence that the storms heeded the cry. To say this is not to limit the place of prayer or to affirm that God has no regard for those who cry to him from out the darkness.

This common experience forced the disciples to comment with wonder upon the fact that the storm on the Sea of Galilee sank to quiet as soon as Jesus spoke the word of peace. At once they passed to the fair conclusion that he was an extraordinary manner of man. They may not have formulated it in words, but they plainly recognized that this marvel was the result of an authoritative person. They inferred a superiority of power in the man

rather than a mere conjunction of natural forces. Intelligent will had intervened and caused natural powers to do what they would not have done but for such intervention. They themselves had gone to him with a petition for sympathy and help. Whether they had a hope that he would bring relief in this way, or whether they merely summoned him to share their common danger, we do not know, but they came to see that this strange occurrence could be explained in no other way than by recognizing the supremacy of Jesus over wind and wave. Their explanation of miracle and of answer to prayer was found in their dawning estimate of his divinity.

If the records of the New Testament telling of miracles wrought by Jesus are trustworthy, and if the instances of the answer of prayer are believed, it is because there is at least an admission of the existence of God, who made and who controls all things. There can be no valid objection to a miracle if there is such a God as the Bible sets before us. Those who deny the possibility of miracles are either those who deny his existence or who have reduced him to such insignificant dimensions that he is a helpless spectator of what goes on.

Let me put in here the caution which I have filed already, that we must not expect to find in nature a full vindication of our blessed doctrine of prayer, or a complete explanation of how those occurrences which we call miracles, have come to pass. Such events, if they occur at all, do not find their counter-

part in the fields or the orchards, where all things follow along in what seems to be an unvarying course. They belong rather to the family, where a father is recognized as having liberty to vary within certain limits the laws of the home and to listen to the pleadings of his children. He can caress one who has been especially dutiful; he can punish one who has been disobedient; he can increase or lighten a task; he can do a hundred things which his will dictates. It has never seemed impossible for a mother to give bread to her child or to comfort one that is in trouble. All of these important dealings of intelligent love with the little ones, and the larger as well, are perfectly legitimate in the realm where love and intelligence have sway. If we were to inaugurate a rule in the homes as pitiless and as cast-iron as the skeptic would have us believe prevails in nature, there would be wreckage in the whole beautiful world of home life. If God is our Father, he has at least as much latitude in dealing with his children as earthly parents have with theirs. He knows how to give good gifts to them that ask him. We ought to remember too, that parental providence is natural. When we undertake to reason from nature, the ordinary occurrences of the home life are quite as natural as chemical affinity and the blowing of the wind. Naturalists must not confine "nature" to inanimate and insensate nature.

Thus far there has been no definite agreement as to what constitutes a miracle, and in the absence

of such definition there will continue to be debate as to whether a miracle can possibly take place. At first it was affirmed that a miracle is a violation of the laws of nature, and then miracles were disputed for the reason that it was supposed that nature's laws are inviolable. If these two propositions are admitted, miracles are out of the question. Answer to prayer becomes to our thinking a contradiction if everything is in a fixed groove and there is no possibility of changing the program. There is a way of stating these opinions that rules all answer to prayer and all miracle entirely out. But it is not certain that all natural laws are inviolable in the above sense; it is not established that a miracle is performed in violation of law; it may be that two of nature's laws may unite and so modify each other that the result will be different from that which either one of them would have produced if they had operated separately.

Last of all, the current objections to miracle have all ignored entirely the existence of mind and its superiority to the forces of matter. Probably as good a definition as we can frame for ordinary use is the one which defines miracle as an act of mind controlling matter, controlling it possibly according to natural law, so that the forces of nature do what they never would have done except for this direct intervention of mind. If this definition is approximately fair, and if it is admitted that even within narrow limits a man may thus modify the course

of nature and bring about consequences that would not otherwise occur, then it surely follows that God has liberty to enter into the works of his hands and exercise a greater control. He surely can intervene in realms in which he is an acknowledged Creator. The doctrine of miracles does not undertake to affirm that every imaginable and fanciful sort of occurrence can be produced. There are contradictions which are impossibilities. Maybe God cannot make two hills without a hollow between them, since the terms of the task are contradictory. Men in their smartest inventions are limited; possibly God has limited himself. One case of intervention by mind to modify the ordinary process of natural law vindicates the possibility of miracle and of answer to prayer.

There were skeptics when it was first announced that a dull wire a hundred miles long had carried a human thought through its long distance and delivered it in good shape at the other end. That was an absolute and radical contradiction of all the commonly known laws of sound and thought. But this man spoke through his touch, he was heard far off, and an answer quick as lightning came back to him. He had to be a scientist; at least he had to be trained in the language and meaning of his touch, but communication was established. That was a genuine miracle to the ordinary theology and science of that day. Nature never did and never will string wires and invent keys and send messages, certainly

not in the ordinary workings of nature. Mind has come in and done this.

A little later the telephone was invented. It never grew up out of nature as an apple tree grows or as a rain-cloud grows, but it came out of a mind. A man decided he wanted something done that nature had not produced, and probably never would produce of itself. The mind made out of common material the wire and the mouthpiece and the receiver and the battery. Nature was not violated, but used and modified. This mechanism did what had never been done before, it carried the human voice a thousand miles and whispered your words, in your tone and accents, into the ear of your familiar friend. Nor do you have to be a scientist to use the instrument. What do you care as to the exact laws of resistance and non-conductors and insulation and electrical waves? You know as little about these conditions as you know of the secret working of divine providence when you pray, but you speak to your friend as you talk to God.

Finally they took down the wire and began to talk through blank space. Over the seas and through the storms the unseen and pathless message wings its flight, and is caught by one who listens for it. We are creatures of sight, and so long as we could see the wire running along above us, we felt that there was a sort of tangible explanation, but the wireless method is a miracle to common understanding, and it is as completely a miracle, within the

realm of human control in nature, as walking on the sea was a miracle in the range of our Saviour's experience.

I cannot dismiss these now familiar achievements of scientific invention until I beg you to consider how much they mean in this connection. Do you understand in the least how your friend a hundred miles away listened last night to your secret confidences, or caught the laughter of your voice, or joined you in tears as you told of some deep sorrow? Not thoughts alone, but the most sacred and delicate of affections speed along. The heart goes all the way. 'Are you refusing to believe because you do not understand? Did you refuse to believe the loved ones were in distress when you got their message; did you deny it all because you could not explain; did you stay at home and treat the alleged message as a joke? By no means. You received it as sad but veritable fact. You changed your program, you canceled your engagements, and you took the next train.

Surely you have no word of derision for the troubled soul that goes into a closet as shut in as the booth of your long-distance telephone, and there where none but God can hear pours out its tale of sorrow to the heavenly Father, with confidence that he hears. If there is a discouraged soul which has been driven from prayer by a skeptical and utterly unreasonable objection, I want to awaken fresh confidence. One hundred millions of intelligent peo-

ple in this country, and a hundred times as many more in other countries, have just been converted to a belief that messages can go afar, even without wires, and that the voice of the praying one is heard in the secret places.

The universe is a speaking gallery, and God is keen of hearing. We do not explain how we talk to each other, nor how we hear each other; how dare we then limit the soul's converse with God? We are in God's kindergarten, learning large lessons from our little blocks and pictures and marbles and tops. Right before our eyes he performs these experiments, simple and significant, to teach us the higher lessons. Just as a skeptic was troubling my faith by saying that God could not hear me in heaven, the scientist was telling me I could speak to my friend in St. Louis. Just as the skeptic was assuring me that I could not pray with assurance because, forsooth, I could not give a rational explanation of prayer, my scientist friend was letting me talk over a wire which reached St. Louis, a wire that was pervaded by an electric force which no man can explain, and I was doing the talking in absolute violation of all the natural forces ever known. Apart from control by an intelligent mind, there would never have been a telephone and a wireless telegraphy, and yet we have them now in perfect accord with natural law. I believe prayer has its place in the laws and ways of God. You may puzzle me with questions I cannot answer as to how

it all comes about, but it is impossible neither to love nor to law that God hears his people and that he can visit them with deliverance.

A variation of the objection to prayer is the affirmation that there is a predetermined schedule on which all things are running, and any interference with this fixed order would throw the entire universe into hopeless disorder. So far as we know, if one of the great central suns of the heavens should be thrust out of its place, confusion in the whole family of stars would follow. We can merely guess what might occur, for we have had only a glimpse of the time-table and the plans. But we are not now talking about what may be considered impossibilities and wide-spread revolutions. The doctrine of miracles does not undertake to have the impossible and the unwarranted come to pass. We are examining into a possible control which mind has over matter within the limits of our experience. We are merely inquiring whether our Father has sufficient management of material and spiritual forces, that he can do what he chooses to do outside of what inanimate nature would do if left alone, and whether he can manifest to us his present control of the works of his hands. We are asking if he built a wonderful piece of machinery and then leased it out so that it is not under his management, or whether it is still subject to his will. We are not just now looking to the Scriptures to confirm or deny our faith. We are simply inquiring of the

scientist to learn whether nature is closed to suggestions of mind, or whether nature lends herself willingly to bring about results she would not have produced if left alone.

A man invents a machine. Into that invention he puts no material except what God made, and the material carries with it into that invention only the properties and attributes which God gave it. The inventor constructs his mechanism with the faith that the forces of nature will act uniformly. This inviolability of law is the one thing he must depend on. Not one rule of nature is violated in the construction, and it is not proposed to violate one in the operation. The machine is worthless unless law-abiding, and unless law continues as in the past. The inventor never admits for a moment that the machine is going to be out of his control the moment it begins to move. He is not expecting to violate it, but he expects to control it. He made it so that he could drill a large or a small hole in the rock; or that he could plane a board thick or thin; or that it would run faster or slower as he might regulate it; or that it would make long or short stitches as he chose to set the screw; or that it would carry stone to the third floor or the twelfth; or that it would sail to the south or to the north as he chose, and not merely as the wind might be blowing. All human devices in the way of machinery to save labor and to manufacture conveniences for human life, are creations of mind, creations made

out of material that is subject to uniform and universal law, and out of material that is not asked to do anything but serve law in its new relation.

You would not take passage on a steamer if the captain told you it was a ship without compass and rudder and guidance. You want to know that every sail responds to the breeze, and that the rudder is in the hands of a man who can follow the course this way or that. It must be good coal in the bunkers, and the laws of combustion and expansion and application of power must be preserved, not violated. It is conformity to law, not violation of law, that makes a ship dependable. The vessel itself and its safe movement to a definite port are alike miraculous, without being a violation of law or a destruction of order. You would not take a ride in an automobile if the chauffeur or the builder should put it in the same class as that in which the skeptic puts this world. No, it must be a machine which a man can stop or slow down or turn about. The wreckage which lies along the automobile path is because of some careless or inadvertent or rash attempt to defy the rules of nature. Its miraculous structure and movement are perfectly natural, but possible only because mind has led nature to do what nature never would have done.

Answer to prayer, while not always involving the miraculous, generally has reference to material and temporal affairs. Both questions involve the problem of God's ability to intervene in nature and im-

press his will upon results which otherwise might not have come about. But even here we have some wonderfully suggestive illustrations from daily experience. You are standing on a street corner, wanting to ride down-town. You put confidence even in the time-table of an electric company. At length the massive steel car swings around a corner and comes thundering toward you ten miles an hour. The whole thing as to why it runs is to you a mystery. In that little wire overhead, not larger than a pencil, there runs a current of power. You cannot see nor hear nor know it in any direct way. But that wire carries sufficient force to run twenty cars. You cannot stop that car. To stand before it is to be crushed. Its power is irresistible, its law of action inviolable. Back of it is a tremendous power-house that will go right on for hours pouring its energy into this car. You do not know why it runs, and you do not see how it can ever stop. What can you do? Pray? Yes, that is all you can do. You hold up your hand, and the car obeys your voice as completely as the winds and the waves obeyed Jesus. It stops right at your feet. You step on safely, and then it moves right on. This little transaction involved the far-reaching principle of running a universe in which mind dwells with matter and holds control of nature.

Our only conception of God is to think of him in terms of humanity. He is a great man. He

thinks, and we do not know how he thinks except as we think. He wills and wishes and plans and has mercy and wisdom and justice. And so if we are to have any conception of how he executes his will and carries on the affairs of the kingdom, we are forced to use our own experiences. And for that reason I have dwelt largely on the familiar things to reach a just comprehension of him. There occurs every day all about us, and under our own hands, exactly the same sort of exercise of mind over matter that a miracle involves. We enter into partnership with our Father. He puts us into his workshop and teaches us gradually how to use the edged tools and how to put nature to work for us in lifting our burdens and furnishing our comforts.

Those who accept the Bible have held for a long time to the unfailing benevolence of God in the kingdom of grace. We have counted Jesus the friend of man. Perhaps we have not understood quite so well that in this temporal world there is also the wonderful evidence that in wisdom and in love for his creatures he made all these things. This good old home is stored full of substantials and dainties, rich with material for the endowment of mind and body. This is your Father's house, and we are just beginning to enjoy it. He is at home too; he is not gone afar off. It is all yours. Accept it from his hand, thank him, worship him.

V

SIN AND ITS REMEDY

THE Bible doctrine of sin has in it no elements that are unheard of in human experience. It is only common speech to talk of breaking a law, or violating a law, or transgressing against a law. These are words of practically the same meaning, and they are familiar to all. The conditions are that one shall be under a rule of action, obligated to obey it, but exercising liberty to disobey it. To violate the law of truth is to be in error, to violate the law of health is to incur sickness, to break criminal law is to become a criminal. The Bible says that sin is a transgression of the law of God given for our direction in moral and spiritual matters. One who violates this law is a sinner. It is with respect to sin that the Scriptures were given. It was to save men from sin that Jesus came to earth and suffered death.

Sin produces disabilities in human life that make a remedy highly important. Further, there are but two courses God can pursue with respect to sin: He can treat the sinner as if he had done nothing out of the way, either by approving sin or by ignoring it. Such a course would be an indorsement of

sin and would introduce anarchy. The second course for him to pursue is to require a measure of penalty commensurate with the transgression. This much our ideas of justice require.

Since God is the author of law, he only can either punish or pardon. These functions of government of necessity belong to the law-enacting power. If any man assumes to have authority to pardon me when I confess to him, he must also claim the right to punish me when I refuse to confess. If he seeks to modify his claim and explains that he merely speaks the word of pardon in behalf of the power he represents, then he must claim the equal authority to speak my punishment, no matter into whose hands he consigns me for the administration of that punishment.

But now that we are studying this subject in the light of nature rather than in the teachings of the Bible, we look to nature for parallel conditions or similar facts. Though the two kingdoms are alike in having laws and are alike in having penalties for transgression, there are some noticeable differences. The word of pardon is not found in nature. One who is sick from overeating may find palliatives and curative medicines, but this is not pardon. Forces in this lower world are charged with a uniformity which the scientist does not allow us to forget. Cause and effect grind along without pity or mercy or grace. The only likeness to divine grace is found in the higher circle of

human life. A father may forgive. Forgiveness may prove to be the highest function of the fatherly office, and it may be the crowning glory of family government. But we are here over the line in the spiritual; nature has no fatherhood of that type.

There is a doctrine of race depravity, of transmitted conditions, of inherited sinfulness. Our first parents disobeyed God, and as a consequence of that the whole race is traveling on a low plane. All Adam's children are put in this one class, even though they did not consent to the original sin, nor have they committed any act exactly like the one in the garden. To this doctrine the world has constantly and almost bitterly objected. Without claiming to pass upon a question so far above us, we may inquire whether our best judgment and our observation support such a protest. Is the doctrine wholly or essentially unjust and unreasonable? Is it a thing standing out by itself, totally unlike what God has done in nature and in providence? If heredity is a law of the universe in every other area, there is created a presumption in its support.

The scientific doctrine of heredity is firmly established. Like begets like, and that law extends to the largest and smallest patterns of life. Our whole system of knowledge based upon nature would go to the winds without this. The breeding of animals for use or sport, the development of flowers and fruits, affirm the law. It is the only hope of the

farmer, and it is the only policy of the investigator. The bird-dog goes to the fields for the first time, and in his service betrays the exact family to which he belongs; he has qualities which he never acquired. Bees are hatched in the springtime and go at once to making cells as perfect as any bee ever made them, cells which are mathematically and architecturally perfect. This fall young geese and ducks will pass over us going southward to where the waters will be open all winter and where food will be abundant. They never studied climatic changes. They have never seen nor heard of a northern winter. No naturalist can begin to tell you how they got that knowledge, nor how they can locate places or determine directions. Yes, we say it is instinct, and that is exactly the objectionable doctrine of heredity as declared in the Bible. Mr. Burbank knows he can depend on the continuance of certain forms of plant life, and while he makes his improvements out of the slight variation that may occur, he has to count absolutely on the perpetuation of inherited qualities.

When we enter the laboratory of the biologist we come into the sacred places of inheritance. This is a sort of holy of holies. We are just now hearing the evidence of the biologist, and we will hear him without passing judgment on some of his other theories. He goes back along the path of an individual life until he places under a microscope what he calls a cell. It is hardly more to the eye,

looking through a strong glass, than a milky drop of water. But the scientist says it is the cradle of a life. In that cell he says there is everything to determine whether the animal to grow out of it is going to be a fish or a fowl. Suppose it is a fowl, he will tell you that it may be a humming-bird, or it may be an eagle; it may be a crow with its coarse voice, or it may be a mocking-bird with its brilliant song; it may be a wren, timid and gentle, or it may be an eagle, daring and puissant. Who knows? Not science; but nature says it is going to be like its parentage. All the story of its past is written there. And so every animal brings with it the sins and the services of its ancestors. Like these are the curses and blessings which came to us from our fathers; in this way we are blessing or cursing the coming generations. The doctrine of inherited sin is at home in this world, both in the field of daily observation and in the laboratory.

The man with a microscope goes even farther. We can hardly do more than simply hear a word from him. He says that an individual comes up through a series of transformations which reproduce all the ancestral forms of life through which he has passed. The embryo is every animal in succession from which he has sprung. The child is the father and the mother reproduced, and he affirms that in this ancestral tablet hung up in your heart's chamber are all the animals which developed into you. I prefer not to comment on what he tells us, but I am

amazed that he goes farther than the Scriptures have ever gone, and farther than theologians ever went in declaring that all of the parents' marks of body, and molds of mind, and peculiarities of disposition follow on down the line and come out visibly in every individual of that race. The affirmation of Adamic sin is mild, it is easy to believe compared with the scientific teaching. While it may not be true literally that when the parents eat grapes the children's teeth are set on edge, it is true that they get the color of their hair and the form of their face and their perverse dispositions from their parents. And the remarkable thing is that the sacred writers put this down a long time before those students of nature were born, and it is still there after all that has been said to the contrary.

We come now in our advance to a statement of the New Testament which has called forth no little protest and some ridicule. I refer to the belief in demoniacal possession. Men were thought to be possessed of demons, and this was part of the sinful condition of the race. Whether that was a prevalent delusion to which Jesus simply referred without either indorsing or denying it, or whether he affirmed its reality, we need not consider. I am merely turning aside to note how nearly that belief is like the modern theory of disease. There is no claim that any scientist has analyzed the body or the spirit and found a genuine evil spirit occupying the premises. Such an intruder could not be

reached by the appliances of a laboratory. We are all coming to be familiar even to painfulness with the germ theory of disease. A dozen or more of our bodily ailments are found to be the result of an invasion of foreign forces, vegetable or animal, which march up and down the red paths of life, and play havoc with our comfort. They afflict us with fevers and consumption and cancer and chronic weariness. We are marching through an enemy's country and are subject to attack at every step. A squad of any one of these hostile forces may find lodgment in our system, recruit their numbers, build their fortifications, and storm the citadel. Our only hope is to build up a better fighting army. A battle royal is on. The doctor goes to work to exorcise the demons, which are legion, and then a million legions more. The symptoms of germ possession are various and often violent. Each enemy has its own way of influencing us. When the cure is effected, if such is the happy issue of the conflict, the victim is probably left limp as in the days of the Saviour. Demons and germs are parasites which seek to live upon our strength and devour us with their poisons.

A pathologist is called in to pass upon the ailment of a patient. He takes a drop of blood from any part of the body and puts it under a microscope. In that drop he reads what is in every drop of blood throughout the entire body. The infection which is producing fever or lassitude or eruptions or excess-

ive heart action has permeated the whole circulation. There is no soundness from crown of head to sole of foot. The patient may not be so sick as some one else, nor so sick as he is going to be later, but he is sick with that disease in every portion of his body. He is just as thoroughly invaded and possessed and dominated by that disease as any theologian has ever represented the soul to be permeated by sin when he spoke of total depravity.

And now let us turn from a consideration of sin to an inquiry as to its remedy. We are to investigate whether science has any transactions which bear resemblance to that doctrine of grace which assures the sinner that there is escape from the penalties or results of his transgression of the law of God. We are face to face with the most serious problem of experience as well as of thought. Perhaps here more than elsewhere the dealings of God with the soul are peculiar. In instituting a scheme of redemption for moral transgressors, a new field is entered, and in the nature of the case there is nothing like it in the universe. We are trying to find in rougher, coarser nature a picture of the most delicate operation in the refined processes of grace. Let us not demand the impossible or the unreasonable. We ask the scientist if in his careful investigation of nature he has found any process which makes it easier and more reasonable for him to understand how the sufferings of Christ as my friend may in some way bring relief and healing to my sinning

soul. We will hear him as he tells us of remarkable occurrences in both the vegetable and the animal world.

The nurseryman is a scientist, not always up in the theories, but a practical scientist. He takes a wild vine grown in the forest. It is a hardy stock. The difficulty with it is it bears only hard, sour grapes. He cuts it off bodily, or opens a gash in its side. Then he gently inserts in this opening a twig or bud brought from another vine which bears good fruit. He removes all the branches of the old stock and proceeds to make the entire tree of the imported variety. There is a complete destruction of the fruit-bearing parts of the old, and when his operation is successful he says the old is passed away and all is new. Henceforth it bears the flower and fruit of the ingrafted variety. The transformation is as thorough as the regeneration of a soul which dies to sin and is made alive to righteousness. The believer must first turn away from the past, and then put on the new man which in Christ Jesus is created unto a new and good fruitage. The process of grafting is outward and visible, but the flowing of a vital current up through the breach and into the branch is a hidden process. It is a mystery to the vine-dresser. He cannot know it has been effective until he sees leaf and fruitage as proof of a real union. One might accurately describe the whole process in words of the New Testament used to set forth that change from a

state of separation from God to fellowship with him through Jesus Christ. "The life which I now live in the flesh I live by the faith of the Son of God." "Your life is hid with Christ in God." Because he lives, we shall live also.

Passing now to the higher realm of physical life, we meet other testimonies of this method of redemption. For some cause, a patient has lost blood, until a weakness which means death has ensued. The machinery is not making sufficient blood, and the life is in the blood. The feat, though rare and difficult, has been accomplished of opening the veins of a healthy, full-blooded man, and of pouring his life-current into the depleted veins of the patient. He gave of his life to be the life of another. It was a literal illustration of impartation and imputation. And beside that operating-table the sacred scenes of the cross are enacted in wonderful likeness. If a skilful surgeon had undertaken to make in the physical an exact picture of the atonement, he could hardly have constructed a more striking picture than this which was made by men who never once had in mind to illustrate divine truth. Beside that operating-table the scientist and the preacher can work together, and they can minister to soul and body in practically the same words. It is one gospel which promises healing to spirit and body.

One more illustration from the sacred art of the physician will be all we can examine. The germ theory of disease has opened the way to a larger

ministry of healing through the use of serums and antitoxins. One who is not skilled in the use of medical terms and who is only an ordinary layman in these matters can speak only in general and popular terms. If I succeed in getting the familiar facts I shall have done what I am aiming to do, hoping in so doing to avoid any blunders which might vitiate the force of the facts. We may take smallpox as the best known disease for this treatment. It is one of the afflictions which, like sin, is contagious, but it has to become one's own before it works him fatal harm. For a long time this stood at the head of the list of loathsome, dangerous contagions. There was no cure for it, and the palliatives were of doubtful efficacy. Nursing and prevention were relied upon. By and by, without aiming to do so, the doctors adopted the Bible doctrine of the atonement, and from that day till now this disease has lost most of its dread power. The world may or may not be growing better in a moral sense, but our physicians have robbed some diseases of their sting, and this one in particular has been toned down to comparative mildness. But we are concerned now only with the process by which this has come about.

They took a lamb or bullock and began the work of cure clear outside of the patient. The sacrifice, for such it was, had to be without blemish, lest in hunting for a cure a worse malady should be introduced. This bullock was made an offering for disease, though by nature it knew no such disease.

They imputed to it the poison of another life. It went through the suffering forced upon it, and at length conquered the poison in its own strength. As a lamb led to the slaughter it bore in silence the curse of another. It suffered, but not for its own sake. After its triumph was assured and the results of the victory were part of its own blood, that merit was drawn off in its crimson offering and the virtue of it all was imparted to the veins of one who is threatened with the disease. The disease was imputed to the victim, and the merit of the victim was imputed to the human being, and the result was immunity, partial or complete, from the death which threatened.

We may not send a minister of the gospel to the public school with a serum which introduced will save the pupils from lying and anger and theft and sinful thoughts. Moral disease must be met with moral remedies in the realm of intelligent and willing acceptance of Jesus Christ. And yet, who can see this wise and scientific and beneficent protection of physical welfare without hoping that the heavenly Father, who made such protection possible, has also a remedy for sin? And who can read the Bible offer of soul-saving through the sacrifice of Christ and not recognize the close resemblance between the gospel of the physician and the gospel of the preacher? The discoverer of vaccination had only to look up at the cross and find that what he had found in nature was already written on the cross.

I am giving no theory of the atonement, any more than there is a clear exposition of what occurs in vaccination. How Jesus could die for us and secure our salvation is a mystery, but it may be a blessed fact of experience despite my ignorance. Even physical science recommends that we accept the statement that the blood of Jesus Christ cleanseth from all sin.

It would be worth while, if we had time, to stop and recall those many Scriptures which talk to us of redemption through him. He tasted death for every man; undoubtedly that means that he provided a cure which is effective for every one who will accept it. With his stripes we are healed; it was his humiliation and pain that secured release for us. We are not guilty of heresy or of superstition when we sing "Jesus paid it all."

At length a number of perilous diseases, such as rabies, meningitis, diphtheria, typhoid fever, and others have been brought into the same class with smallpox, and we dream of the time when all can be cured, even to the uttermost, who trust the atoning sufferings of an accepted substitute.

As a preacher I have no license to tell any man that because he has a complete Saviour, therefore he can sin as much as he likes. A perfect salvation does not mean license to do evil. Paul had to say a word, and he said it with emphasis, in answer to those who proposed to sin more that grace might abound more. Nevertheless, I do find in the Scrip-

tures a comfortable assurance to believers of their security in the Lord. He gives protection to the saints. "There is . . . no condemnation to them which are in Christ Jesus." This doctrine of the safety of believers has been made the object of violent criticism. And yet I find nature provides immunity to certain people and on certain conditions. There are, for example, a number of diseases which, as a rule, come but once. Measles and whooping-cough and smallpox and others well known are of this kind. Is it not singular that when the disease has gone through the body once the way is closed against it ever afterward? Normally one might live a hundred years and suffer exposure every day without the least danger of falling under the contagion. Supposably some anatomical or physiological change takes place while the disease is on that makes its return impossible. That element of the body which the disease preys upon is destroyed, or a fortification is built up which safeguards the life for all time to come. There is not a scientist of any sort who can even begin to tell you what nature does or suffers to bring immunity, but it is secured. Then when I am assured that believers "shall not come into condemnation," that no one shall pluck them out of his hand, I remember the lesson we have just had from science, and I say, the same God is likely to follow the same general plan in these two worlds which, after all, are but one in his hand.

Once more I enter my disclaimer. We are not proving by the scientist that the Bible is worthy of belief. We are not proving the doctrines of the Scripture from the field of science. Spiritual truths must have their own validation, and their verification cannot be made wholly outside of the field of the spiritual. What I have sought to do was to find some likenesses. If the same God made the soul and made also the material world, then probably we can find finger-marks on the one like the finger-marks on the other. Maybe he was thinking of the spirit when he made the flowers, and possibly the fragrance in the flower was the thought he was just at the moment holding concerning his children who were coming soon to walk among his flowers. He left the thought there for them to read.

VI

THE SEEN AND THE UNSEEN

ONE of the familiar objections made to our religion is that we are dealing with the unseen, the imaginary, the unreal. Theology is looked upon as a structure built on theories which have not been demonstrated, while science rests on facts which are all verifiable by careful observation and reliable testing.

There is a semblance of truth in this comparison, but it is far from the whole truth. The business world has to do with actual goods, unless it is speculating in futures. Money and grain and hardware and drygoods and town lots stand out to be seen and weighed and measured. A scientist states his theory, and then with a test-tube we can see through and with scales we may handle and with liquids right before our eyes, he performs his experiment and we see the whole process take place. One turns a crank or pushes a button or holds a glass toward the stars or measures the length of a sound wave, and our senses pronounce themselves convinced. These men are out in the open and their experiments are convincing.

But the preacher must tell you about a soul sub-

stance you have never seen; he speaks of an endless life which stretches out into the unexplored future; he insists upon the constant overshadowing of a divine presence; he bids conformity to a moral law that is not found fully in a formal code; he appeals to a conscience which may or may not consent to its responsibility; and he holds up rewards and penalties which are not yet in evidence. And so it comes about that sincere souls are in more or less doubt as to the reality of all the claims which religion puts up for its vindication. More or less we have adopted a faulty principle for our practical use, that nothing is real unless it can be measured by a yardstick or weighed in scales or subjected to chemical tests. Probably half the unbelieving world and maybe a considerable percentage of believers have an idea that science is a demonstration from start to finish, while theology is a guess from beginning to end.

It is worth while to stop long enough to inquire if this comparison is a fair one. Religion might rest on assumptions and still be true, but evidently it will be greatly commended to our confidence if we discover that it is quite up with science as to its substantial foundations. No truth is going to injure either religion or science, no matter from which realm that truth is drawn.

Paul says with utmost clearness that we have to do with two classes of reality—one the seen and the other the unseen. The seen is the one which

lies very close to us and appeals to our sense; it is temporal, it belongs to an order which is passing away, limited in time and space. The unseen does not come to us through the senses; it lies very close to us, but its presence is not impressive; this unseen belongs to the things which abide forever.

A reverent student of nature has a sacred calling. He is following the footprints of the Maker of all things. He is reading God's thoughts written in material volumes. Whatever he tells me my Father says and does in nature, I am going to accept with something of the same reverence with which I regard his will written in the Bible. My only concern just now is that we shall not allow ourselves to be cheated out of a rich inheritance on the mistaken charge that we study nature in the light and study revelation in the dark.

There is a considerable list of words which go in pairs, describing this same general distinction. We speak of the material and the immaterial, the seen and the unseen, the temporal and the eternal, the finite and the infinite. Let us not hastily conclude that these mean the same as real and unreal, the demonstrated and the speculative, the true and the untrue. We see many things we do not know, we know many things we do not see, and in every department of life we accept and depend on many things we do not comprehend and believe in what we cannot prove.

In order to come at once to the faulty distinction

which has been made in describing the material as real and the spiritual as unreal, I venture to say that the scientist has made just as many assumptions as the theologian, and his assumptions are just as vital to the validity of his theories. Underneath the entire structure of science there is a foundation made up of assumptions and things taken for granted. In no department of knowledge have we been able to begin with the beginning. When we enrolled and started to learn, school was already in session, the text-books were there before us, rules of procedure were posted up, and we began with the class where we found it. If you will let me change the figure, I will liken the situation to a great factory. You are admitted as a workman to put in your little day. You do not know who built the factory, or how the machinery was installed, or when the affair was put into operation, or where the raw material comes from, or whether the machinery has been running for all time just as it is now running, nor have you liberty to go down into the engine-room and inspect all the machinery involved. You study what is in sight, you comprehend part of it, you guess at some other things, but at best you come into definite knowledge of only a fraction of all that is involved. In some such manner we are limited in what we know. There is a great unread past and there is a great unwritten future, and there is a vast unseen present. All our knowledge is circumscribed, and probably all we have

is faulty. This limitation applies quite as aptly to our scientific knowledge as to our theological knowing.

It was my boyish delusion that science answers questions. One of my eager expectations was, as I read a scientific treatise, that the author is going to answer on next page the question he raises on this page. When I turned the page I found he answered the old question by asking two new ones. The chief product of science is more problems. The shepherds who slept in the open plains of Mesopotamia fell asleep studying the stars, and their only unanswered questions were as to the distances and the simpler movements. The astronomer of to-day has a whole book full of unanswered questions as to the composition, inhabitants, climate, atmospheric conditions, eccentricities, variable movements, processes of formation, forms of orbit and position of these heavenly bodies, and the plan upon which celestial architecture proceeds. I am not an astronomer; if so, I could state a dozen more problems that I am not now wise enough to know.

The same is true of any science. As the territory of the known doubles, the territory of the unknown multiplies many fold. When you are imprisoned on an island a mile in circumference, there is but one mile of border to the unknown world; but if your island of the known is enlarged till its border is ten miles, then the fringe of the unknown is tenfold larger. We know more than the ancients,

but we are consciously ignorant of more than ever entered their dreams. The printer's case in a modern shop has a much larger box to hold interrogation-points than the case of Gutenberg. You could have put in a primer all that the students of the Middle Ages asked to know, but the fullest expositions of science now are largely made up of what we are trying to find out. Never was the figure more appropriate than now, that we have simply walked along the shores and picked up a few shells while the unexplored ocean rolls away from our feet.

Every scientific fact leads toward the infinite and the unseen in all directions. There is no end to the smallest study until the whole realm is covered and the entire universe explored. If you pluck the smallest flower from its cranny in the wall, it refuses to let you go until it leads you out to the borders of creation on every side and introduces you to all its kin of every degree. It holds secrets of attraction of gravitation, secrets of chemical affinity, secrets of vital action, secrets of biology, vegetable classification, adaptation to animal wants, secrets as to light and color, and step by step it will lead you from its modest fragrance and beauty until you stand in the presence of Him who paints every flower and courts the love of every heart.

Lest I should arouse unwarranted prejudices against this method of putting what I want to say, let me assure you right now that I am gladly accept-

ing the findings of our scientists, just as fast as they are receiving full confirmation. No doubt they are in the main right. There is no other way to build science except to build on assumptions. Time and experience are proving that most of these assumptions are reliable. I am simply defending religious thought against the unfair charge that it is built on uncertainties, while science rests on impregnable rock. My point is that all human knowledge rests ultimately upon faith, or theory, or unproven hypothesis. This fact, however, does not destroy the value of religion or of science. It ought to make us careful, but it should not make us unbelievers in either field.

As illustrations of the assumptions which the scientist is compelled to make, let me repeat some things which have already been mentioned. One of the fundamental and universally accepted theories of science is that light and heat are one, and that they are merely modes of motion. Motion is not a substance or entity or something, but is only matter moving. Doubtless this explanation is correct. But a dozen questions arise at once which this theory must answer. Here is a situation which must be accounted for. We get light from the sun nearly a hundred million miles away. Our atmosphere, which is material, extends only fifty miles upward. Beyond that is vacancy, vacuum. Since light is only matter in motion, on what sort of bridge or wire or conductor does this motion propagate itself

through these millions of miles of emptiness? If our theory of light is going to be saved from wreck, we must build that long viaduct. To meet the emergency we assume that there is a form of matter which had never been dreamed of before, and of which there is still no direct evidence, and we call it ether, luminiferous ether. We allow it to be classed as matter, but we excuse it from all the known laws which govern matter; but we do this at all hazards and against all scientific rules, because we cannot get light and heat from the sun without it. I have no doubt that theory is here to stay, for a time at least, and it is exceedingly useful in saving us from utter confusion, but it is an assumption. There is far more evidence of the existence of a spirit in man than there is of the existence of this ether. It is just as hard to prove the coming of warmth from the sun to our earth and explain how it is done, as to prove the coming of God into the hearts which open to receive him.

Until recently what is known as the atomic theory was generally accepted. Take this rough illustration. A man is engaged to tear down an old building. He removes the roof and attached portions and then begins with the walls. He finds it built of rectangular bricks. These are the smallest portions he comes upon. Very naturally he concludes that a brick is the unit of structure, and that it is the smallest portion of material used. So the scientist figured out an imaginary piece of matter,

which he named an atom, and this he inferred to have been the smallest and the ultimate piece of material used in world-building. But now a speck of radium threatens to upset this theory, and we may be told that a knot of electrical force is the ultimate material, and we are not able to say whether this is electrical or material. And then we are launched out on a wide sea of uncertainty as to whether matter is a product of force, or whether force inheres in matter, or whether they are distinct in essence, but associated in the field of our observation. Are they eternal, how do they come to act in an intelligible manner, have they always behaved this way, will they continue to do so indefinitely?

When some of us started to school a little while ago we were told with perfect assurance that the earth was a bit of boiling matter which the sun threw off from its outer surface as it revolved rapidly. This accounted for the heat that rages in the interior of the earth, and it was explained that the crust hardened as the surface became cool by radiation. This was scientific gospel. Just now a very much approved theory is that the earth was built out of frozen material coming together from interstellar space, and that the heat which is found in the interior of our globe is the result of pressure of the superincumbent mass. I am not finding fault with these surmises as to how planets are made, for I am sure the geologists and astronomers

are giving us their latest and best conclusions. However, I am only pointing out that even science is hedged about and permeated with a considerable amount of uncertainty, not to say ignorance, and we are not to the place where we can put our theories away as complete. No doubt our geologists are right in much they teach us, and we are going to stay with them, if we can keep up with them, but they are not yet insisting that their opinions shall be accepted as final.

It has to be assumed in science that the forces which operate now have always been in operation, that they have acted with the same vigor—that gravitation, affinity, upheaval, erosion, and rainfall have continued with no radical variation. It has to be taken for granted that no forces have been removed along the way and none introduced; that the earth has moved essentially in its present path and that its changes have been the result of agencies now at work. In the face of this, however, there are proofs of violent alterations, radical upheavals, and catastrophes of wide extent, and changes of climate which cannot be explained. There are facts which no present theory explains. For example, underneath North Pole regions and within arctic circles are coal-beds, which must have been deposited when vegetation was rank over the fields which are now buried in perpetual ice. Remains of elephants and mastodons are discovered embedded in great bodies of ice, demonstrating that once the

region was a hospitable home for warm-climate animals. Some of these animal remains are so well preserved that they furnish nourishing food for the Eskimo dogs after all these years of cold storage. Nor is it possible to explain this change by saying that the earth's axis has gradually changed its inclination until the poles, once turned to the sun and covered with tropical growth are now robbed of the sun's heat. It is claimed that these preserved species still retain in their stomachs the undigested food of tropical growth, thus proving that the catastrophe which came upon them was as sudden as it was violent.

No one knows better and none admits more readily than the scientist himself that all his attempted demonstrations involve insoluble problems; at least that they border upon the unknown. In biology he follows the animal structure back along the path it has come, until he reaches the simplest form to which he can reduce it. There lies before him a cell. This is the ultimate in his analysis. By aid of a microscope he looks into and through a little cell, a vesicle of watery-like substance, crossed it may be with finest lines. There are a hundred mysteries hidden there from his inquiring eyes. Nature knows the secret. If it is the cell of a bird, it may be of the variety that wears bright plumage. Hidden there may be the singing talents of the mocking-bird, the instincts of the migratory bird, the fierce nature of the bulldog, the wild ferocity

of a lion, the auburn hair of a German, the egotism of an American, or it may be there is nothing higher in the cell than the low life of a worm. Behind that cell stands some sort of intelligence or design or fidelity to law which knows all this and brings it out without variation of a hair's breadth; but no human knowledge can extract the secret. Such are some of our limitations. We are at the edge of our little island home again, and we look out on a wide-reaching ocean which still preserves its secrets and shuts us in from complete knowledge.

Once more I must say a word to protect me from the charge of unsettling confidence in the teachings of those who study nature. I am supposed to be talking to those who have turned their backs upon the Bible and the church for the reason, as they put it, that theology is made up largely of theories that cannot be demonstrated, of doctrines which cannot be verified, and of teachings which have no assured basis on which to rest. And this claim is further emphasized by pointing to science as resting upon demonstrations and facts and visible proofs for all it asks of us in the way of confidence. Such a reason for rejecting religion while accepting science is unreasonable. In truth, we are living and believing and acting every day in the midst of things which are beyond comprehension. There are mysteries around us and within us that might well strike us with eternal paralysis, provided we are to accept nothing which stretches out beyond our com-

prehension. Our most useful knowledge is bordered by a limitless margin of ignorance. Life's highest chapters are wrought out in the midst of what is beyond our comprehension. And right along with this somewhat depressing view of our limitations is the uplifting assurance that the God of nature never disappoints us when we follow in faith his leading. We trust him as we plant and eat and drink and serve, even though we hardly know what we do. And in like manner, those who walk after him in spirit and trust the grace which is quite as well inside our knowledge as the affairs of nature, are enriched by their confident trust in him. A little knowledge and a little faith go a long way both in temporal and in spiritual matters.

All honor to the patient and careful men who study nature. They come right up close to Him who made and guides all things in such conformity to law that it becomes possible to understand something of his way. He counts it no intrusion to inquire about his works. And if these patient students find as great mysteries in the works of his hands as we find who study his word, let us not reproach each other for our ignorance, neither let us refuse to recognize the greatness of him with whom is all wisdom and knowledge.

VII

THERE IS ONE GOD AND BUT ONE

THIS was the claim Jehovah made for himself far back in time. Long afterward a man of New Testament times said there is none other God but one. To that same faith the world is gradually but certainly coming.

About the existence of a superior being or beings, three views have been held. Atheism says there is no god; polytheism says there are many gods; our faith says there is one and but one God. Christianity has been compelled to meet those who affirm that there is no intelligent higher being over us, presiding over life and destiny. An atheist brushes aside as worthless all the proofs which are found of intelligence and power in the world around us, and asserts his confidence in the ability of matter to have originated itself, or at least to have put itself into all the useful, artistic, and manifold forms in which we find it. With modesty he ought to go only so far as to say that he has not come across God in his narrow travels, and to admit that there may be corners he has not yet explored. To those who are rejoiced to know there is a heavenly Father, and that he is near them to do them good,

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it seems singular that any one should feel uncomfortable over the thought of living in as large a universe as this with God in it also.

But Christianity has likewise been compelled to face those who are of the belief that there are more than one superior being in this world of ours. Earth and air and sky have been peopled with imaginary gods about whom grew up marvelous stories of their passions and envies and cruelties and vices. Atheism puts us in a world empty of morals; polytheism puts us in a world governed by immoral powers. Only theism gives us citizenship in a realm of righteousness.

At one stage of scientific progress there appears to be a disposition to eliminate a personal God from the affairs of the physical world. To put it in a form least objectionable, I may say that the tendency is to put God away back at the beginning, allow him to be the possible originator of forces and conditions which have prevailed since the beginning; but all things have been wrought out wholly by impersonal and secondary agencies. At best he is left a distant spectator of the machinery which he put in operation at a dateless period, but which he is not allowed to touch now lest he throw the universe into disastrous confusion.

Let me suggest the reading of two psalms that by a strange sagacity have been put next to each other. The One Hundred and Third Psalm is one of the most religious and spiritual passages in the

Bible. It is a passage one wants to read in the house of worship or in the closet in the secret of his presence. It glows with praises of his mercy. He is dealing with the soul. Forgiveness and pity and tenderness and grace burden every verse in a struggle to bring peace to a sinful soul. And then as if to meet the objection of materialists, the next psalm takes you out of the house of worship and leads you away into the material world.

Modern science has found no simpler, more reasonable, or more scientific explanation of the physical universe than the psalmist gives us here. He leads you to the mountains, beside the oceans, through the valleys, beside the fields, among the trees, into the lair of wild animals, and among the clouds. With pious devotion he shows you God's trade-mark on every one of these exhibitions of his creative skill and power. Lest there should still be a skepticism in your heart, he digs down under the foundations of the mountains and of the sea, and shows you the broad beams of these chambers. And then he leads you among the manifold flocks and herds of animal life. He shows you the cleft where God has made a hiding-place for the conies, and the branches for his birds. Up in the clouds he points out God's paths for the rain-clouds and introduces you to the forges of the thunderbolt. Yonder are the bounds which he has built in mountain ranges to keep back the ocean from man's home, and you do not fail to note that the largest moun-

tains face the largest seas. In channels he has furrowed the rivers flow homeward to the ocean, and in the hollows he has fashioned the deep waters are confined. And then he leads you among the flocks and herds which graze in his pastures and rest beside his quiet rivers. Even the young lions take their food out of his hand, and the goats hide themselves in the clefts he has fashioned in the rocks. Literally millions of animal forms, differing in tastes and habits and dependence wait upon him, that they may receive their meat in due season. There is a claim which goes down to the microscopic forms which no human eye has beheld, and which stretches its scope to the farthest star that hangs on the outer walls of the universe. Our God filed his claims to this fair and wide dominion. He is sole owner.

Has science any word which invalidates Jehovah's claim to the creation and ownership of all things? Putting it in other terms, does monotheism comport with the best interpretations of modern science? Has science any message in support of any one of the three theories—that of atheism, that of polytheism, or that of monotheism?

In an earlier time there were many gods. To the simple folk who saw the clouds floating above, with no apparent connection with anything on the earth, it was perfectly natural to believe that some deity had exclusive control of these navies of the sky, and so there was a god placed up there. And

then the ocean was a thing apart, and as its waves rolled their fury back and forth, there was another god assigned to the seas. Still another god was invented for the fields where harvests ripen, another for the flaming fires, another as the god of war, and so on, to account for these various and separate fields of force and action. Gods were multiplied beyond number. The facts and forces and fields of each department of nature were so distinct from every other field that it was difficult to conceive them as all under one management. It was still more difficult to think of them as uncreated, un-governed, and absolutely self-controlled. There was not atheism, but polytheism. No one god was thought capable of managing these widely separated and widely different realms of power.

But the advancement of science has been largely a recognition of the unity of the material world. There is no kingdom of the air independent of the sea and the earth. There are many rooms in this great factory, but there are belts which run through these separating walls; there are shafts of power from the basement to the attic. There is one power-house which sends the same energy into every room and into all the diverse machinery. One mind directs all the movements, so that the fabric passes from one room to another, from one piece of machinery to another, so that when it is finished it bears witness to a perfect partnership in the various processes.

For illustration, let us take the force of gravitation. It is that which made Newton's apple fall to the ground; it enables you to walk and live on the earth; it holds your house in place and fixes your furniture where it can serve you; it keeps the moon from leaving the companionship of our earth, and preserves it from falling on our heads; it binds the globe and other planets of our system into an orderly family around the sun; it goes beyond that and unites in safe companionship our solar system with some larger circle and with some far-away center; it ties ten thousand systems into a harmonious whole, and the farthest star on the confines of creation is preserved in its birthright of position. That force operates on every little and every large piece of matter according to its weight and distance. If that is not true, then the entire science of astronomy is a piece of foolishness. It serves to weigh your pound of sugar, and it binds ten thousand worlds into one great system. That one phase of science makes it absolutely impossible to believe in a world divided up into a thousand little separate and hostile kingdoms. Whoever put one of the stars in place, put all of them in place; and the processes of world-making that are going on now are directed under that same control. It took scientists one hundred years after Newton made his discovery, to find what this law of gravitation meant. Since then they have used it to find new heavenly bodies; by it they have fore-

told the coming and the paths of comets; by its help they have weighed the stars and measured their distances from us. Because the heavens are under one control, there can be an astronomy.

Another evidence of the unity of all created things is found in the practical identity of the material out of which suns and planets are composed. The spectroscope is a wonderful invention. For you and me it is enough just now to know that by using a prism and letting the light from any radiant body fall through the prism, the rays of light will be separated. And then, what is most wonderful, the scientist can tell what chemical element is furnishing that light. The chemist can take a stone into his laboratory and apply chemical tests and discover what it is composed of. Or, he can get the rays from an incandescent stone in a star and tell what it is composed of. The spectroscope has demonstrated that all the stars and planets are made up of essentially the same material, though not always in the same proportion. Thus, not only are all the heavenly bodies governed by the same law of gravitation, but they are made out of the same material. Did you ever see the dresses of two ladies made of the same weave? Then you know what this fact of science means. Not only is the same material used, but when the mass is fashioned into a sun or planet or system, the same pattern is used, even if the two stars are tens of billions of miles distant from each other. They

are all made in the same shop, out of the same material, fashioned in the same way, and weighed in the same scales.

If it were necessary we could pursue the identities still further, with the same result. Let us take the matter of light and simply file its claim in a few words. The law of light which governs your electric bulb in its service to you is the same law which brings to your eye the image of a star a million miles away. Yes, there are stars which you may look upon to-day that may have been blotted out ten thousand years ago, and the news of the catastrophe has not arrived. General Jackson fought the battle of New Orleans after peace had been made, but the information had not come to him, and he went on fighting. This light falling so gently upon the tender retina of your eye has made a miraculous journey to reach you. But it has come solely because the unseen ether which rests softly upon your eye continues in an unbroken stretch, a perfect sea of ether right up to that star, and there is not a space of one-thousandth part of an inch in all the millions of miles where there is the least divide. A little ripple like that made when you drop a stone in water started years ago, and with unfailing fidelity it has kept coming; it did not have to pass through an enemy's country; it had to pay no toll to a foe on the route; it did not have to transform its message or slip through by cunning device. From start to terminus it has been

under one management, moving in one medium, and it comes with its message unchanged.

Thus we have found certain fixed and unalterable forces prevailing near and far in the physical world. The force which holds planets in their places, which keeps the heavenly bodies in a happy family relation, which prevents the crash of worlds in a moment's time, and which makes possible the change of seasons and the continuance of life, this mysterious force that no science can begin to explain, is in exercise everywhere. It is a unifying principle. It is like a ledge of rock running underneath a continent; and while the surface may be made up of hills and valleys, cities and country districts—still they all rest alike on this basal support. It is a bit like the steam-engine down in the basement, which sends out its energy through the whole factory. It is like the stability of a great building, which keeps the walls and rooms and floors and foundations from falling apart and saves the structure from wreck.

We have seen that Sirius is made out of the same component parts that form our earth. Its elements and their arrangement into spherical shape and motion are the same as prevail here. And so of all heavenly bodies. And we have found that these bodies, no matter how widely removed from each other, are all immersed in a common sea of ether, which reaches and touches them all and furnishes communication among them by means of

light. These bodies are as so many great cities linked together by a common system of railroads and telegraph or steamship lines.

Surely I need not stop now to insist upon what this all means when we come to the three problems which I named at the opening of this discourse. A plurality of gods cannot be an admission of science. There may have been a time when nature, as then understood, had little to say concerning the origin and control of mundane and stellar affairs. As long as nature was looked upon as an aggregation of different spheres, a sort of conjunction of realms all unlike each other, it may have been easy to put a god in charge of each department. Polytheism is common to an unscientific age. But when it has been demonstrated that the universe is indeed a unit, as the word implies, then we must have a conception of the origin and management which is in harmony with that unity. Every step of science has been toward a harmonious and compact and mutually helpful world. Because the universe is one, there cannot be many makers. Because it is an intelligible universe, it must have had an intelligent Maker.

It seems hardly necessary to pursue this line of demonstration further. However, science teaches us the same plain lesson if we confine our investigations to mundane affairs. It is not a necessity that we should stay among the stars to find proofs that the wisdom which made one part of the mate-

rial world made also every other part. The unity of which we have been speaking extends to the small affairs right about us.

It was not in the dreams of the ancients that light and heat were one and the same. True, it was common to see a wire or iron when put in certain connections pass through both stages. First it gave out warmth, even to burning the hand; and then when the application of heat was made more vigorous, the dull iron glowed with red and white. It took thousands of years for us to learn that heat was motion traveling so many miles an hour, and that when the speed is increased, the same motion becomes light. Probably we have yet to learn how close is the likeness of identity between light and electricity; at least we have found that electricity is also a motion. Sound comes under a separate list in some respects, and yet it is also motion. Whether we are going to find out that light and heat and electricity and chemical affinity are all in close partnership or not, we have found that nature can do a thousand things with the same material, and can conduct a myriad of operations with one force.

Whatever one may think of the various statements of the theory of evolution, there is no question but that there are at best only a few general patterns by which animal bodies are fashioned. Nature has but one general set of working plans for building planetary and solar systems, and we are beginning to see that she has very few patterns

in which she molds animal forms. The structure begins with a cell, which in chemical material and in organized form is identical for all prospective varieties. As the organization proceeds differentiations take place, but according to a few stock patterns. One is almost ready to say that divine genius for invention is limited, and that nature's economy in this respect is barely above the rank of poverty. The constant wonder is that she has so few and simple outlines with which to start, and then that with so little of variety in the beginnings she can finish up with such an overwhelming collection of dissimilar structures. There may be five thousand varieties of birds; but, after all, there is but one simple pattern for bird-making.

If a skilful and careful scientist had set out to make this vast and variegated universe, with its bewildering diversities in mineral and vegetable and animal structures, he would not have made his first mixture of material until he was provided with a few millions of elements to assure him of sufficiency in the variety demanded of him. Sixty or seventy such elements would have seemed to him all too meager a stock out of which to produce this myriad-formed collection of organized structure. And careful students are wondering now if there are sixty or seventy of these elements, as we have been counting them, or whether, after all, we have not overestimated the divine supply of resources, and therefore put too small a value on

the divine ability to fashion and combine. The factor of matter in the material universe has been overworked by our scientists, while the factor of intelligent design has been put at too low a percentage.

But we cannot pursue this deeply interesting study longer. Science has led us carefully along the path of investigation, until a wise and resourceful God is a logical necessity. The eternity of matter is more unthinkable than the eternity of spirit. Nothing can possibly account for what we find but an intelligent, creative, and controlling Power. Science is merely thinking over again the thoughts that are expressed in nature. If one finds a piece of paper in the road and, on examination, discovers that it is written over with characters which he can decipher, and further that these characters contain thoughts which he can comprehend, then there is but one conclusion to which he must come. A mind kindred to his own did this thinking some time ago, and then expressed it in these letters. What he reads out of them was first written in them. That a mind takes them in is proof that a mind gave them out. Nor does it at all weaken this conclusion to answer that the material world has grown up into its present shape through long processes. In such case there is not only still the indubitable proof of intelligence, but there is the further increasing proof in the long-sustained and systematic perseverance of an intelligent plan.

It will be noticed that I have not touched upon the great moral evidences which are found scattered throughout the material world. Since man is both physical and spiritual, he is mixed up with the affairs of both kingdoms. There is a field of most interesting and profitable study here, in tracing how harmonious is his progress in physical matters and his simultaneous progress in spiritual attainments. Though he is a citizen of two worlds, his dual citizenship is one harmonious whole. He is under the same tutelage and discipline in both. The God of his body is likewise the God of his soul.

Theism is the inevitable conclusion of a right-minded scientist. I know it can be pointed out that a few scientists are materialists. Admitting most that I have been saying, they dismiss the idea of a personal God, and ask us to fall down and worship an impersonal, unthinking, unfeeling, and purposeless universe. Such exhortation will never win the world to hope and virtue. When a soul cries out in the dark, it waits to hear an answering voice that speaks its own tongue.

The letter which came to me in the lonely days of college life was filled with a mother's thought and love; when vacation came satisfaction was reached only in going back home and looking into her face and hearing her voice. From what we read of our Father's mind written in his two letters, nature and the Bible, we want to know him more fully and stand before him in peace.

VIII

THE VINE AND ITS BRANCHES

PLANT life has built its empire upon the material. It employs the forces of gravitation and light and heat and chemical affinity in its architectural structures, and makes its body out of dull matter. With that newer force which science has sought in vain to discover, it lifts up the sand and soil, the carbon and hydrogen and oxygen, and transforms them into combinations which inorganic chemistry knows nothing about. It is the advent of a higher kingdom into a lower, and what was dead matter is born from above into new beauty and meaning. In its class this mystery is equal to that of the spiritual birth which confused Nicodemus, and has furnished problems for theologian and psychologist. Some of the laws of the lower are still in force over this regenerate matter, and yet there are so many things entirely new that tests and definitions and explanations which serve in one sphere cannot be depended on in the other. If there are mysteries in the laboratory in lifeless substances, we need not be astounded to find still more of the insoluble when we have to deal in addition with the activities of the unknown force which we try to describe as vital.

Jesus laid claim to the vegetable world as the creation of his hand and as the text-book for his richest instruction. Possibly he was walking with his followers along the path through a vineyard, troubled in heart because he could not bring them to understand that their new faith must be fixed in him, and that their usefulness to the world depended on their living connection with him. In a few words he drew the outline of this comparison. God the Father occupies the place of husbandman; Jesus, in the work of redemption, is the vine itself; disciples are the limbs and branches and twigs. The humanity of the Master is made more conspicuous in the lesson than his divinity. His lesson is directed to the branches, on the ground that their value to the husbandman is wholly a question of their relation to the vine. The work of man is to believe on him whom the Father has sent. We may not press these likenesses beyond the rank of illustrations, but they are more than incidental similarities, because they are creations of the same hand. Since they are illustrations, they are not identities; but because this comparison is taken from one of our Father's patterns, and because Jesus called attention to points of contact, we may reverently follow his suggestion.

A bit of exegesis may aid us to a better understanding of what is taught, and at the same time bring out more clearly the lines of beauty. There are four different words in the Greek New Testa-

ment which are alike translated into English by the word "branch." Two of them we may dismiss just now, for they do not concern this study. The other two are different in form, but are from the same root, and may be considered but different forms of the same word. One of them is *klados*, and the other is *kleema*. For purposes of etymological study we may consider the two as but one, since they have the same origin and apparently the same significance. Under ordinary circumstances we might be justified here in assuming that Jesus is referring to the limb which grows out of a tree or vine, and which is filling the only place it has ever occupied or may ever occupy. But when we note that Jesus confined himself to one word, and further that this is not the word which classic Greek would likely use for the limb of a vine, we are justified in making a closer inspection.

There is a verb quite familiar to readers of classic Greek, which means to break. In the four Gospels it occurs fourteen times where Jesus is said to have broken bread. This is its invariable and easy significance generally. Its form is *klao*, or *klazo*, these two forms being used indifferently. After the law observed in forming many words in that language, a noun was formed from the verb which expresses the result of the action in the verb. These are called verbal nouns, and are to be met in every tongue. The result of a breaking is a broken piece, a fragment. The piece which is broken from the

loaf is a *klados* or a *kleema*. At first sight there does not seem to be any connection whatever between such a verb and the branches of a tree, and it is because there is no original kinship between the word and its use here, that the significance is important.

Science was early in the orchards and the vineyard. Beginning how far back no one can tell, the vine-dresser knew how to graft buds and branches and roots of one plant into another and secure a more valuable fruit. By usage the common word to designate a scion or cutting or graft was this word which we have been examining. The bud or branch which had been severed from its original vine was now only a fragment, a piece resulting from a severance, it was a *kleema*. We do not literally break off the bud or branch we are going to graft, but sever it with a knife, and we call it a cutting, which is exactly what the Greeks did. Where they use the word which means to break, we use the word to cut. And just as our word cutting has lost its generic scope and has come to be applied only to one kind of cutting, so it appears that in Greek the average hearer would think of a branch which had been obtained for purposes of grafting. Paul employed the same figure when he argues the problem of bringing Gentiles into the kingdom. He says in substance that the Jews were the natural branches growing on the Hebrew stock. But because of their unfruitfulness or to give room for purposes

of grace, some of these natural branches were broken off, and other branches, severed from a wild olive tree, were brought and grafted into the kingdom of promise. Not only does the apostle employ the same figure Jesus had in mind, but he uses exactly the same word. Paul carries the imagery a bit farther than Jesus, since he points to the removal of the natural branch to give room for the cutting.

To one who delights in analogies and who can follow them even where the trail is dim, this lesson in the vineyard is full of further interest, and it may help to make understandable the facts of regeneration. One of the first processes of grafting is the severance of the cutting from its old support, and reducing it practically to a state of death, for it is separated from every possible source of nutriment. Dead to the old, it waits to be made alive to the new. In the process of grafting into the new, there is a work that is formal and another part that is vital. The incision into the vine, the insertion of the graft, the wrapping and bandage and all the trimming for neatness of surgical taste, these are but clumsy doings. But there is hope that beneath the covering of bandage and bark a secret and silent process takes place, in which the life of the vine, full and fresh, flows out into the veins of the branch to give it a full supply of life. The ceremonial forms of inserting and binding and trimming may be accomplished with apparent per-

fection, and yet nothing come of it all. There must take place the establishment of the vine's life in the branch, and growth must follow. For some days it is not possible to detect whether the grafting is a success, but in a little while the decision is proclaimed in the putting forth of leaves and fruits on the branch. There is conclusive proof of success in the productive power of the branch. Without the vine fruit-bearing is out of the question. The husbandman in a real vineyard watches for these signs of life, and when they are discovered he continues his care by trimming and training. He seeks that the life which is begun may be increased to the multiplying of fruit. If, on the other hand, the branch does not produce bud and leaf and fruit, the proof is conclusive that the formal attachment was only mechanical, and hence worthless. As the words of Jesus show, the old-time husbandman then cut away the engrafted branch and destroyed it. The undertaking was a failure. The parable follows strictly the entire proceeding, and gives the sequence of successful grafting and the sequence of defeat.

Two troublesome questions have been raised by a somewhat literal and misguided interpretation of this parable. It has seemed to some that Jesus teaches, at least by implication, that the branch is a natural outgrowth of the vine, and that if the relation of a soul to salvation is mirrored in the parable, then the teaching plainly is that children are born

and grow up members of the body of Christ. At any rate, such a theology has found place in familiar and ancient creeds. It was taught that especially the children of believing parents are heirs of the kingdom, are entitled to full recognition as Christians because they are members of religious families and supposably members of the church. In later developments, this birthright was supposed to extend to all infants, and there was accorded to them the status of church-membership. A more modern doctrine of the same final import is that religion is the natural inheritance of a human being. The normal child is born with religion as one of its endowments, and there is nothing more or less to be done for it than a cultivation of that religious talent, just as we cultivate inherited tastes and powers of conscience.

For myself I hold essentially to the older view that Jesus spoke to Nicodemus a truth of race-wide application. He was not limiting himself to either Jews or Gentiles when he demanded a new birth for every human heart. Salvation is not the result of birth of the flesh, it does not come as the fruitage of the flesh, it is not produced by church-membership or obedience to external ordinances; it is spiritual, it is from above, it is divine. The safety of unconscious infancy is a different problem, and seems to be left entirely in the hands of our Saviour, and is not dwelt upon in setting forth the way of life for adults. Certainly this parable we

are studying creates no problem of this sort; but, on the contrary, it teaches by analogy that the grafting of a wild branch into a domesticated vine is the product, not of unaided nature, but of a beneficent purpose and by a higher power. It seems to me impossible that Jesus should have taken as his figure the one plant which was peculiarly the product of grafting; that he should have used that particular word when there were other words which he could better have used unless he had intended the special meaning that this word carried; and finally, the application of his parable is truer to nature under the meaning we have found in it than if he had spoken of the ordinary branch.

There is still another difficulty which some systems of theology have found in the ordinary interpretation of this parable. On the face of the parable it would seem that a living branch which had sprung out of the vine and had spent all its life there may reach a stage of unfruitfulness which brings upon it condemnation and destruction. The doctrine of falling from grace is held by many excellent and intelligent believers. I do not care to enter here upon the discussion of that question. There are numerous warnings to Christians against falling into sins which harm and hinder. There is no definite line drawn, up to which one may sin and retain place in the pale of salvation, but beyond which the title to everlasting life is withdrawn. There may be little profit in debating all these

knotty problems which present themselves in theology just as similar problems obstruct the path of a scientist. Nevertheless, I venture the caution that this parable, when interpreted on principles of sound exegesis, does not touch the question of the final perseverance of saints.

At least it does not teach that those who are abiding in Christ and drawing their life from him may be stripped of their new birth and sent back into death. The fire kindled yonder back of the vineyard is not fed in this parable from the branches which have flourished and dwelt securely in the vines where they were created, but they are fed by the twigs or branches which have been handled by the nurseryman, which have been taken from the old setting and placed in the new, which were nursed with hopeful care that they would become part of the vine. Adopting the corresponding religious terms, we may say that they were touched by saving influences, they broke away from sinful environment, they suffered a sort of separation from the world, and gave some evidence of a spiritual revolution. Possibly they made public profession of faith and went so far as to submit to baptism and seek church-membership. 'All of this is commendable, unless this is all. There remains the demand of the Great Teacher, "Ye must be born again." Inside the church is a perilous place for one who has no real and living connection with Christ, especially is it perilous in a time when there is a prevalent belief

that ceremonies and rites and professions and organizations are sufficient to carry the soul up to God.

Aside from these suggestions which the parable seems to me to make more or less plainly, there are great lessons lying upon the surface of this wonderful picture. The purpose of our Saviour is that we should bear fruit. He is never satisfied with leaves. Barrenness called out one of the very few displays of his anger in miraculous demonstration. The fig tree was not living up to its profession and opportunity. Judged by the law of life laid down in the New Testament and by the facts of their living, not half of us could maintain in an earthly court of justice our claim to church-membership. Jesus in this parable, intentionally or not, presents a gradation in his requirements. He first declares that he expects fruit; then he advances and lays claim to much fruit; and finally he puts on the unbounded requirement for more fruit. For this a vineyard is planted, and for this souls are brought into churches and fields of service. The all-seeing Eye may know whether indeed all of us are genuinely converted or not, but to human eyes there is but one evidence, and that is the fruitage of life.

There are scores of lessons ripening on every leaf and festooning every twig of orchard and forest and field. If cautious in our endeavor, we may linger after the Saviour is through speaking, and under warrant of his example, we may look for further tuition. The vineyard is a prepared place. Best

conditions possible are provided for the growth of the vines. A sort of church-membership, or church-fellowship, is laid out to make the plant certain of a fair chance. The field lies on the right hillside to get best service of sunshine and shower and drainage. The soil is enriched and stirred. A protecting fence or wall insures defense from without. Any well-intentioned and well-behaved vine would much rather be located there than in the wild woods. I have gathered grapes in the woods, but the vines were far apart, they were hampered in their growth, they took hard chances against their foes and the forest fires; too often their ripened fruit rotted where it ripened, because it was not accessible, and it was never so abundant as it ought to have been. There is poor prospect for a vine that undertakes to despise the conditions for largest fruitfulness, and despises the closer companionship of other vines of its class. There is no need, and I have no disposition, to abuse those who are trying to live Christian lives in disregard of the organization and fellowship and cooperation which the New Testament provides for. Even though churches are not what they ought to be, and granted that they have neglected some of the functions assigned them, they are the families of God's children, they are the working forces of his kingdom, and they are the subjects of his promises. As yet there has been found no horticultural chemistry which will turn the thorn bushes of the wilds into good fruit trees,

nor has there been found a way for the good fruit tree to hold its own and do its best located in the uncultivated jungles.

In my boyhood I well recall a few miles from my home a little clearing of two acres on top of a wooded ridge. At some time a pioneer had come there and built a cabin and cleared out the beginning of a farm. Here was a mound of stone and earth where the house had stood. Its walls were gone, and with childish fancy I have stopped there in the deep solitude and repeopled the home from my fancy. It was the home-place of pilgrims, the camping-place of immortals; here they had been happy or unhappy. But the children no longer played at the door; no longer was it a place of prayer and domestic love. Stretching out from it was this space of two or more acres, and around this the trees stood in close line as sentinels to mark the borders of their unspoiled domain. Fences were all gone. Here, near where the corner of the house had stood, there was a ragged, crooked, dwarfed peach tree. Maybe by accident the stone had been dropped by careless hands, but nature is not exacting as to who shall do the planting, though she is unrelenting as to the character of seed planted.

This tree outlasted walls and foundations, and stood deserted by all the others that had been in the procession of life which moved along this road. Every year when it came time for peach trees to bloom, and when all the hills about were decorated

with the white-and-pink blossom, each tree holding aloft the trade-mark of its clan, this poor, forsaken tree sent out its banner. It held up a bloom here and there, trying to hide its poverty by shrewd distribution, as the housewife arranges her furniture for better appearance. It was a poor, pitiful effort on the part of the tree. But it had a life in it that claimed its kinship with every peach tree in the world. It never consented to betray its God or its kindred. It stood up to be counted when the census was taken. It wore its few and scattered colors on rally day, but there was not much enthusiasm. But more pathetic still was the little tree's effort to bear a harvest. If the season was entirely favorable, a few peaches appeared here and there. They were of the right variety. As a church-member, the tree was loyal. There was no hypocrisy in its behavior. It took no celestial microscope to classify it. No soft examination was required to get its name on the list. But these few knotty peaches never amounted to much. Insects preyed upon them. The hard ground doomed them to littleness. A poor soil withheld material. Horses and cows fed on the lower limbs and taxed vitality. Last of all, this unguarded, unclaimed fruit was the property of the first bunch of boys who, in their Sunday roving, came that way. Yes, this is a peach tree, but what is the use? The lack of fruit is the forfeiture of life.

If we were to cross the fence that surrounds

this vineyard, the forest beyond would be found full of sermons. The tree that is bent in its first years never quite recovers. The nature with which a tree begins it must carry to the end. There is no regeneration for the forest, except as seen in the parable with which we started this study. Inside the tree is a life, and that life shapes leaf and flower and fruit. "The life is more than meat, and the body is more than raiment." Some trees are useful for the fruit they bear while they live, others are valuable for the timber they leave when they die. Not all fruits are equally delicious, but each in its place is useful. There is no debating society in the grove among the trees over their respective worth to the world. Not often is a crooked tree useful, though occasionally it is the crooked form that is prized. Many a tender sapling has been forced out of shape into perpetual crookedness by the overshadowing presence of some worthless tree—the curse of a strong life falling in silent force upon tenderness to its permanent hurt.

These silent sermons are delivered every day and every hour for those who love to commune with nature and worship out in these first temples. Whether we walk in the forest in wintertime, when our own spiritual life is in its decline; or whether we come out as the soul is in tune with all the opening joys of springtime; or whether we are in the midst of splendid achievements for God and humanity, and therefore in touch with nature's sum-

merit; or finally, if with coming age we are ripening for the home up yonder and are beside the earthly reapers gathering their rich harvests, in whatever season of the year or in whatever mood of heart we come, nature is our mirror, our teacher, and our guide. If he can make these matchless forms and beauties and utilities out of common dirt, what may we hope for ourselves and others in the achievements of that higher material and that holier atmosphere? Our relation to Jesus is not official and formal; it is personal and vital. Each soul is, in this parable, a branch. The connection is with Christ directly, and not through intermediaries. Upon this indwelling depends the assurances of faith and fruitfulness in any department of the Master's service.

IX

LIFE AFTER DEATH

AN ancient writer, referring to what we call death, said: "Then shall the dust return to the earth as it was: and the spirit shall return unto God who gave it." The simplicity and clearness of this sentence is worthy of notice. There is no straining of words, no reach after large terms, no impressive or rhetorical arrangement. Man's origin, nature, and destiny are set forth mostly in monosyllables. The statement is likewise scientific. 'A man is composed of two distinct parts. His body is made up of earthly material, and when it has fulfilled its purpose it will go back to the earth. Dwelling in this body and associated with it in a mysterious partnership is his spirit. It is not material, and therefore it will not go back to the earth. God gave it. From him it came, and when its mission here is completed it will go back to its home.

Those of us who believe the Bible may not need to go elsewhere for a confirmation of our hope to live on when this life is over. The written promises are our sufficient assurance. Probably all men are endowed with this pleasing hope. It is divinely implanted, and we can readily believe that he who

fitted the lungs and the air to each other and the eye to the light has also made a heaven to answer our deepest longing. But just now we are not going to appeal to the universal faith nor yet to the pledges of Scripture. We are going to look at what we can see and learn around us and note if nature has any processes which in any way hint at the existence of immortal spirit. In our present study spirit, resurrection, and immortality are inseparably connected. Any one implies the other two.

The theologian and the scientist are met at an open grave. Between them stands a mourner, to whom this question is just now of deepest interest. A problem which touched him lightly at other times weighs his heart down. With irresistible pleading he looks up to these two men and asks for the best word they can give him. His is not an idle or curious inquiry. His heart is throbbing to find anchorage. Have they both an answer? Do their answers agree or do they contradict each other? Will both their answers or either of them bring peace? You know what the theologian will say, for you have heard him repeatedly on just such occasions. We are especially anxious to hear what the scientist can say. He is a patient and reliable investigator; he has brought us many wonderful discoveries; he is a man of sympathetic soul. He will be true to his scientific profession, and he will be tender toward the mourner. He will not speak without warrant.

In the first place, he will tell us that he has no definite knowledge on that point. His business is to deal with material objects and forces. If there is such a thing as spirit, it does not come within the field of his investigation. His instruments of testing are a thermometer, a pair of scales, a test-tube, a telescope, a microscope, a yardstick, a steam-gauge. Spirit does not and cannot respond to any of these appliances. He can take a ray of light and analyze it. He can weigh the rocks and discover a chemical element in a compound, but there is no way for him to imprison a spirit in his laboratory and compel it to yield its secrets.

We easily understand what he means. His telescope does not give him temperature, his scales do not reveal distant stars, nor his barometer measure the strength of chemical affinity. An instrument of examination is worthless for any test except for the particular one for which it was made. This is what the scientist means when he assures us that he has never discovered spirit nor immortality in his experiments.

But we are willing to have him go farther and say that his inability to discover spirit is not even one step toward the conclusion that there is no spirit. Indeed, his whole system of scientific fact and theory is based upon assumptions which he cannot directly verify. He is confident that electricity exists, but he has never been able to set it out by itself and know it. Its effects are abundant and

abundantly evident, but he has never come in sight of it. He believes there is a force called gravitation, which operates near and far on all bodies and according to mathematical precision, but he has never been any nearer this force than he has to spirit. Passing from unseen forces to matter itself, he holds that there is a substance, a form of matter, which reaches all the way from the sun to the earth, and he calls it luminiferous ether. There is no evidence that such a thing exists except its effects. The universally accepted theory of light must assume such a medium, or the whole theory of light falls to the ground. And yet there is no doubt in the minds of any of us as to the existence of electricity and gravitation and ether. These we know about, just as we know about spirit. And thus our scientist leaves us large room for faith in the immaterial and the immortal. The limits of his knowledge are not to be taken as the limit of what is possible or real.

But we are anxious for him to tell us whether there is anything in all the reach of his studies which carries a bit of likeness to what we are taught in the Bible concerning the life beyond. If nature does not teach the impossibility of a future life, has it chapters and lines and pictures which would in any wise suggest continuance, or resurrection, or a change in life without destruction? Is there a pattern shown us in the Mount, according to which we may shape pictures of our imperishable longing?

Do the footprints of our God across the face of the earth lead toward heaven? A hint from God is worth more than all the guesses or doubts of men, whether that hint is given in word or symbol.

Suppose it is your first full and conscious day on earth. There has not been a moment's break in the warming, blessed sunshine. Through the long hours you have come to take this light as a matter of course, and not once has a suggestion arisen that it will come to an end. You have no conception of what darkness is. But at length shadows grow deeper, a haze settles on the scene, and night comes. You are not sure whether light has gone out or only your sight has failed. Is it total blindness that has come to you, or is it extinction of the sun, or is it both? You have reached a new passage in life, you have come to the end of a chapter. Maybe this is the last. Vain is the wish for the sun's return. There is no profit in straining the eyes and turning a sightless face toward the west. But in a few hours the east grows radiant, and in good time the same sun comes up and gives another day as bright as the one you mourned. Nature's power and plan are not defeated.

Lengthen your experience, and suppose you have started life in the springtime, and you have known nothing but the warmth and growth of summer. Surely this is a world of perpetual life and bloom and fruitage. And then one morning there is a chill wind from the north. Then follows an un-

heard-of something, a biting frost. The flowers wither and fall, the fields turn brown and dead. Trees lose their foliage. Death settles over all the scene. Has the sun lost its path through the heavens, was it all in vain, is life to be buried evermore in ice and snow? Your experience has no answer to give. Hope finds no friends. But winter, though longer than the night which gave you trouble, comes at length to its close. The same sun swings back in its course. The same trees put out leaves, the same carpet spreads itself over the meadows. Once more flowers bloom and fruits ripen. There was change, there was alternation, but identity remained, an unbroken plan was carried through the apparent disaster, and the seasons continue.

When loving parental care saw the little children fall asleep that first night of human occupation of the house our Father provided for us, there must have been a dread of what might follow. They had seen no sleeper awake; they were untutored as to what sleep is. Did they watch and weep that first long night, asking if love is cheated out of its object? There is a vivid picture of death which came soon into the circle of human experience. We may not know what the heart could make out of such a trial; the story is unwritten, but it had some of the elements of anxiety and uncertainty that gather around death. But the waiting was not in vain. That strange spell passed away soon, and the

life which had slipped off for a bit of quiet, a sort of home-going to the unseen or a love visit, returned brighter and fresher than it went. Weeping, which endured for a night, gave place to joy in the morning. It was not the end, it was part of life's divine program. Night, winter, and sleep are divine appointments, not disappointments.

The tree which is to succeed the one now full of fruit must go down through a seemingly lifeless seed and must be buried in order to live again. The dull worm that has no thought for itself and no employment perishes into a butterfly and a weaver of silken threads for raiment of kings.

Why should it, in a world such as this, be thought incredible that God should raise the dead, or that those who go out from us are going to wake up in a new day, or grow on in a new springtime? Nature has no potion which brings on eternal sleep. All elsewhere death is but the gate to wider and fuller life. It is a marvel that we live at all; once living, the marvel would be that we should ever cease to live.

Let us linger yet longer with this interesting man and his yet more interesting studies of nature. You have not failed to notice that there has been a marked change in the class of studies pursued by the scientists. The ancients studied the wider movements of the stars, and came to some sensible and to some foolish conclusions. They could see the rivers and the mountains and the larger objects of nature.

But they went little beyond the coarser objects of study. But modern scientists are going deeper. They discover and measure the force of chemical affinity. They find the law of gravity, and they describe and measure its influence through stellar space. They trace the current of electricity and calculate its power to carry messages, draw trains, and drive machinery.

In other words, they are not dealing with matter in the rough, but with the concealed, invisible, intangible forces and relations of matter. It is the X-ray, or the minute germ, or the life-cell, or the thing we call life itself, that they are studying. Out there a little way lies the immaterial, spiritual world with which our faith has to do first of all. Over here are the material things with which we have grown a bit familiar. Here right about us science began its beautiful discoveries. But as progress advanced, the scientist moved farther down toward that as yet undiscovered line where the material and the spiritual border on to each other, and his latest and most startling discoveries have been made in the realm of the unseen, the intangible. He is dealing with the finer forces of nature rather than with her coarser material. The farther he goes, the more refined and the more nearly immaterial are the secrets which he uncovers for us. Some Sabbath morning he will awake and find himself face to face with a theologian who has come down from that other sphere, and who was

